

ARMY

OCTOBER 1959

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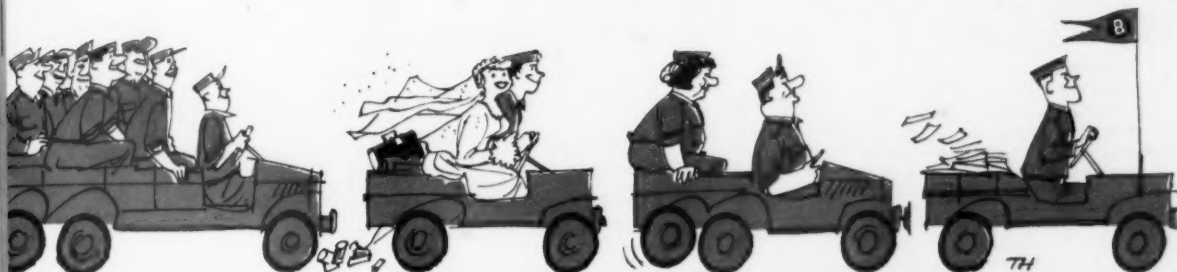
The Fallacy of a Dual Capability

THE ABSOLUTES OF MODERN WAR FORCE THE ARMY TO GO NUCLEAR

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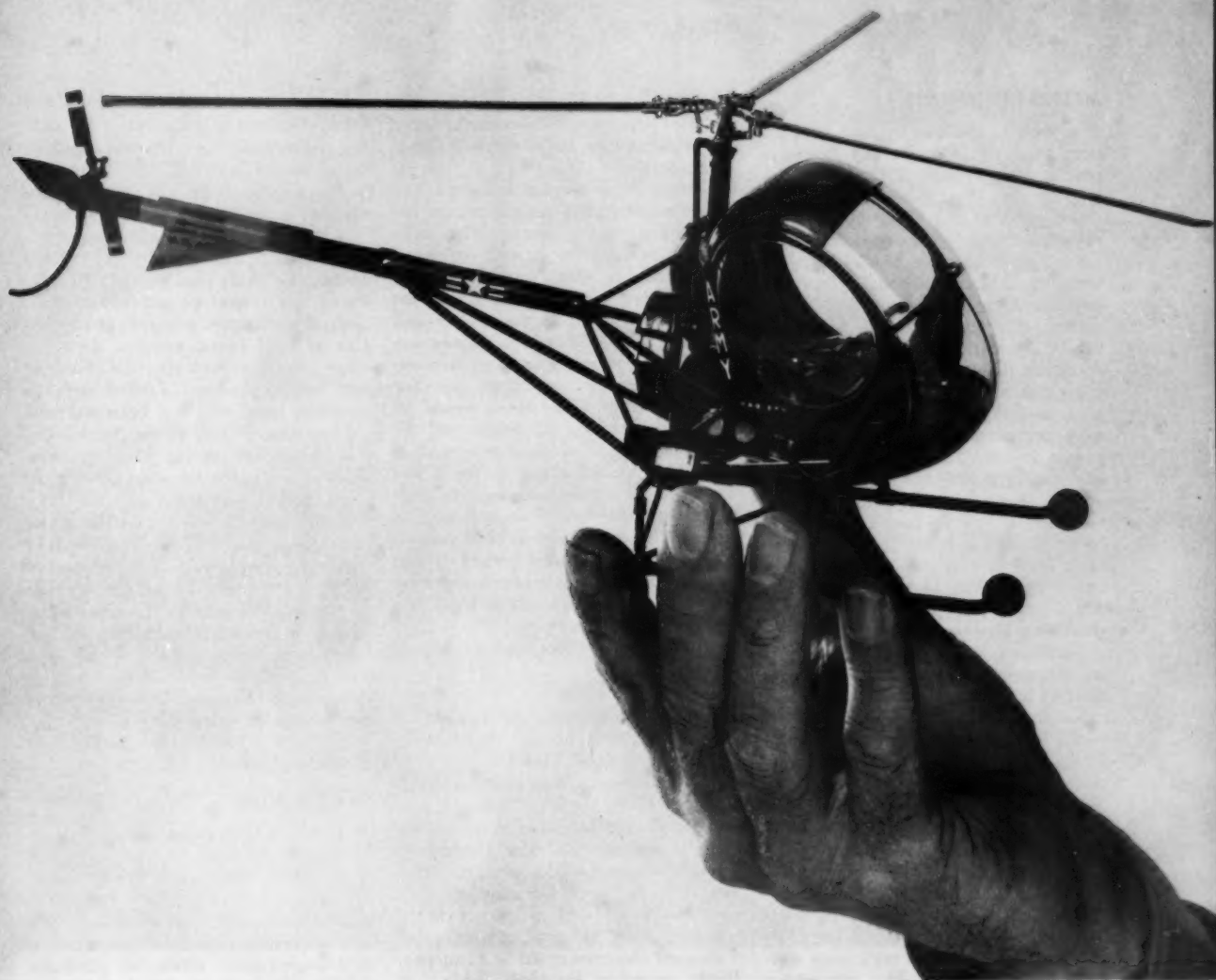
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THE MONTH'S MAIL

MESSRS. REGIMENTS

● Generally speaking, a man who has been in a regiment for any length of time develops a pride in that unit which pays tangible dividends in terms of devotion to duty and desire to do everything possible to make his outfit better. From time to time we hear of instances where a noncommissioned officer has served with the Umpteenth Artillery for so long that he has become known as Mr. Umpteenth Artillery or whatever the unit's designation may be.

Here is my suggestion. Publish a list of those soldiers, now on active duty with regiments, who have the most service in their respective outfits, and designate each one Mr. Umpteenth Engineers, and so on. To a soldier who was devoted to his outfit this could become quite a coveted honor. Many ideas come to mind such as the presentation of a scroll by the commanding officer and a place of honor at the Organization Day parade, to name a few.

Probably most of these soldiers would be noncommissioned officers or warrant officers, but a commissioned officer occasionally might make the list. Rank would be immaterial. A statement signed by the battle group or battalion personnel officer should be evidence enough and any challenges could be verified by comparing personnel records and discharge certificates. Not much work would be required. Were I the battle group commander, I would like to find that man and shake his hand. I would be interested in knowing if any of our other battle groups had a soldier with more service in our regiment. This recognition would serve to encourage long and honorable service in regiments. In line with the Combat Arms Regimental System,

emphasis should be on regimental service, not company or division. Service need not be continuous, but of course it should be honorable.

I know ARMY's space is limited, but a page once a year in our magazine would be justified by the salutary effect such mention would have on our regiments. The British say that "men die but the regiment lives on." All too often in our Army it has been "Regiments die and the men wander elsewhere." Many factors tend to wean experienced noncommissioned officers away from our line outfits. I think many of us would be interested in seeing the names and the length of service of these fine soldiers who have resisted the urge for a soft berth and have remained loyal to their regiments. As CARS recognizes, the strength of our Army is built not on devotion to this Wherry project or that golf course, but to a soldier's regiment. So here's to Mr. Umpteenth Infantry—and long may he serve.

REGIMENTAL MAJOR

BATTLE BOOTS

● A hearty second to the remarks of Lieutenant Reade in his "Boots, Socks and Battle Jackets" [July].

For four years, from 1908 to 1912, Maj. Edward L. Munson, Medical Corps, and his committee labored to change our Army's shoe to the most comfortable walking-boot last ever designed: the Munson Last. A major objection of their comparative study of military footwear was to the stiff toe caps then in vogue—the same objection raised by Lieutenant Reade regarding the new field boot. Major Munson firmly insisted upon the use of a pliable toe cap constructed of leather identical with that in the uppers;

he had found that this soft cap did not become warped and distorted after soaking and then drying, with resultant severe injury to the forefoot.

My own experience in 1944, while serving as consultant in tropical medicine to a Quartermaster Board field experimental group, with that terror of military shoes, the Australian model, likewise found that its hard toe and heel cappings with flabby uppers efficiently macerated feet on brief forced marches. This was more quickly noticed after the shoes got wet and then dried. Soldiers with us on these tests, who had been stationed in Australia, testified to the Aussie's dislike of his own shoes and to the long lines of Diggers at our own QM depots—buying our GI shoe!

"The secret of war lies in the power of marching—namely, in the strength of legs. The tendency in these days is to decry the necessity for a high standard of physical efficiency in the constitution of the Army, and to exaggerate the importance of improved arms." That's from Robert Bartholow's *A Manual of Instruction for Enlisting and Discharging Soldiers*, published in 1863.

COL. JOHN B. DEHOFF

Baltimore, Md.

THE 1ST MINNESOTA

● In regard to Brigadier General S. L. A. Marshall's piece on "Pork Chop Hill" in the July issue, there is one other U. S. combat unit which suffered a greater percentage of casualties, if only by one percent, than Kilo Company did, in a single combat action, yet continued fighting. Maybe their action doesn't equal, or excel, all factors considered, what happened at Pork Chop.

During a crucial period on 2 July 1863, at Gettysburg, Major General Winfield Scott Hancock, in person, to gain a few minutes' time, ordered eight companies of the 1st Minnesota Infantry to charge two large brigades of Confederates. These eight companies were the only organized force immediately available. Realizing the situation, they charged at the double, broke up the first line of the enemy with bayonets, established their own line, and though under heavy fire not only from the front, but both flanks, held the line until reinforcements arrived. All field officers were wounded, and nearly every company officer killed

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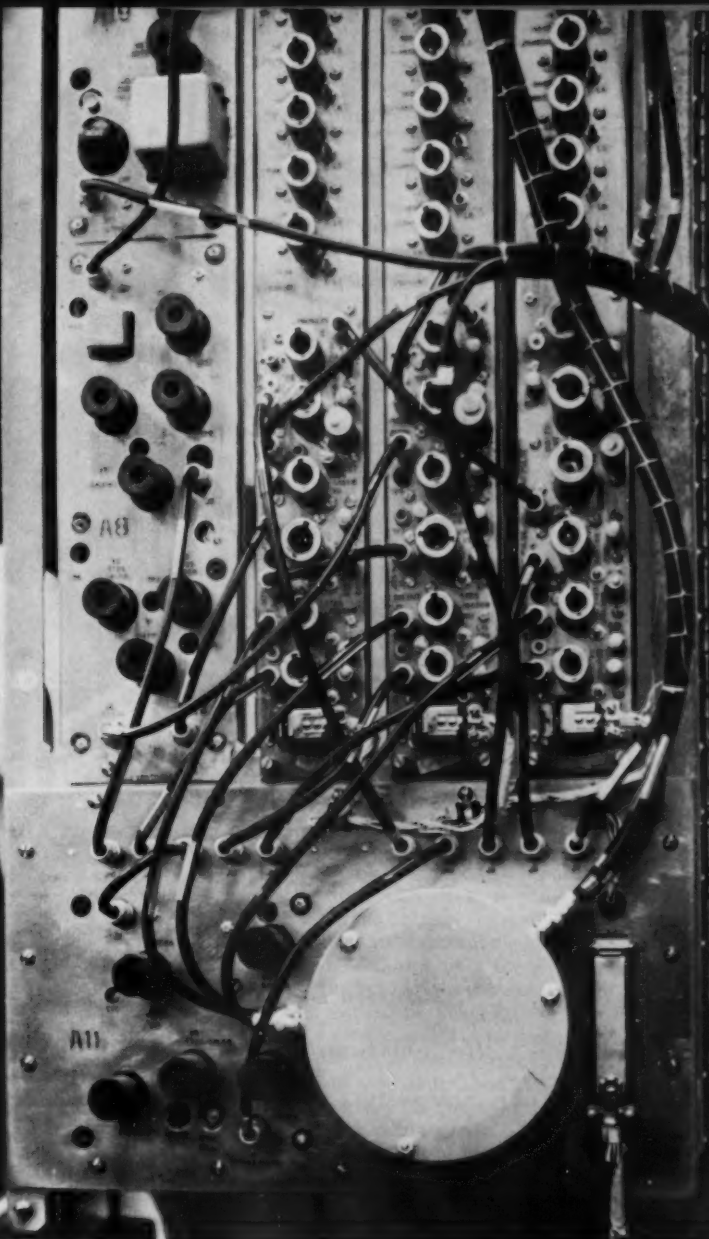
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THE FIRST STEP



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or wounded. Of the 262 men who made the charge, 215 lay on the field dead or wounded, 47 were still in line, and not one man was missing. They had suffered 82 per cent casualties.

I don't think more need be said.

ALAN EMANUEL

Anaconda, Mont.

THE CAP, FIELD, FIELD

● Recently an order concerning refinishing helmet liners got me to thinking about those days back in 1942 when my outfit moved from a Texas post where sun helmets were worn to the Mojave Desert, where they were even better. Except that we were issued M1 helmets. Liners might be worn on post, or on duty, but the overseas (garrison, field, or go-to-hell) cap was to be used in town, with nice direct sunlight and 110 degrees of heat.

Southern Germany, 1945: "Helmet liners will be worn when off the post, at all times." The order was signed by the same officer—General Patton, CG of Third Army, who had commanded the Desert Training Center. The former use was for protection against the sun; the latter to make us look military, no doubt. To impress whom?

Think of the money we would save by keeping them in the bucket and removing only to replace worn ones. If we must train with them, wearing the whole pot is the only way to do it. That, or wear a sign: "I am naturally hard-headed."

Someone once found you could stuff stiffening between the earflaps and the body of the field caps. Many of the troops tried it, and lo! like well-scratched poison ivy, the practice spread across the body of the Army. Then came orders that the mechanic's (or utility) cap be fitted in true military style. This article originally was meant to protect the head from the OE and GO that drippeth from the best-kept vehicles, to stay on the head while diving in sinks or performing work of any strenuous sort. When made up with the stiffening, a slight movement dislodged it, making it useless for the purpose.

I think a cap of the baseball type should be issued to replace it. I have spent a lot of time looking over the caps of military and would-be military units. Until Fidel Castro came along, the nearest approach was the cap worn by Hitler's Storm Troops. The baseball cap is naturally stiffened by the head of the wearer, the most suitable article for the job. This stiffening is not easily mislaid and does not lose its shape while being washed. As for field use, put the earflaps on the outside. I have yet to find a cap of this design which is worth two hoots for use with the flaps down. Size it to your head and your ears suffer. Size it to your ears, and you look like Mortimer Snerd. Try one that works, like the old blanket-lined winter cap. Ugly, but warm.

However, if we feel that practical headgear does not look good enough, I propose another: the cap, field, garrison, which could be made up to show what a Hollywood designer thinks such caps should be. It could be a shako design, about 12 inches tall, with plume, in color of branch (fluorescent dye), with a gold or chrome flexible chin strap, with various hanging chains about it, in gilt. The proper badge to be worn according to

rank, and on one side unit crest. On the other side, in enameled metal, division or Army patch, about natural size. This one article alone should bring the textile industry out of the doldrums, if they are presently stalled there. It would make the soldier the cynosure of all eyes, amuse the dignified members of the Marine Corps, and promote the manly sport of fisticuffs all over the land. It might even bring back the garrison belt, a useful close-combat weapon.

This piece could be used only on post, Stateside. The current cap, field, could be used as cap, field, field, for work, or for noncombat activities overseas. For combat areas, the cap, field, combat, could be any warm head-covering the soldier could cram under his tin hat. That should take care of everything.

CPL. JOHN B. O'STETSON

MILITARY HERITAGE DEN

• Battery A, 3d Observation Battalion, 25th Artillery, is a training unit providing advanced individual training in fire direction, sound and survey MOS to some 400 enlisted men each eight weeks. To acquaint these young men with the fine traditions and customs of the U. S. Army I have set aside, and renovated, a room in our dayroom which is to be a Military Heritage Den. This den is decorated in Colonial style and has two reading desks,

a library, a display mantel, and built-in magazine shelves. We intend to buy appropriate military history books and publications which deal with the U. S. Army. So that trainees are encouraged to use the den and its books, we are placing on display small articles of military equipment, uniforms, and weapons or models of weapons. Our display mantel will be used for this purpose as will a glassed-in case.

To fill our display case we shall need help. If any ARMY readers have small articles, such as I mentioned, war souvenirs, books or other publications, and would be willing to send them, we should be very grateful. All contributions, no matter how small or seemingly inconsequential, will be heartily welcomed and displayed.

CAPT. RICHARD N. STODDARD
Fort Sill, Okla.

MISSING TROPHIES

• It is known that in 1941 the 1st Squadron, 2d Cavalry (now 1st Battalion, 2d Armored Cavalry) boxed for storage its considerable silver including polo trophies and a (much needed) punch bowl. Unfortunately, this battalion has never located its valuable collection of silver trophies for activities prior to World War II.

We would appreciate hearing from ARMY readers who might have clues to the location of any portion of the Dragoons' tangible record of pre-World War II competitive spirit and unit esprit.

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NEW POWER—Sikorsky crane helicopters now in design will have high-powered gas turbine engines and will carry payloads from eight to 40 tons.

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ARMY



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A PROFESSIONAL PUBLICATION DEVOTED TO THE ADVANCEMENT OF THE MILITARY ARTS AND SCIENCES AND REPRESENTING THE INTERESTS OF THE ENTIRE U. S. ARMY

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MOTOROLA MILITARY ELECTRONICS CAPABILITIES REPORT:

Strategic Deployment of Technical Personnel



Dr. Daniel E. Noble, Executive Vice President, Motorola, Inc.

"Dynamic organization...not static...is the key to productive use of technical talent in the field of military electronics."

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William S. Wheeler, Vice President and General Manager
Military Electronics Division

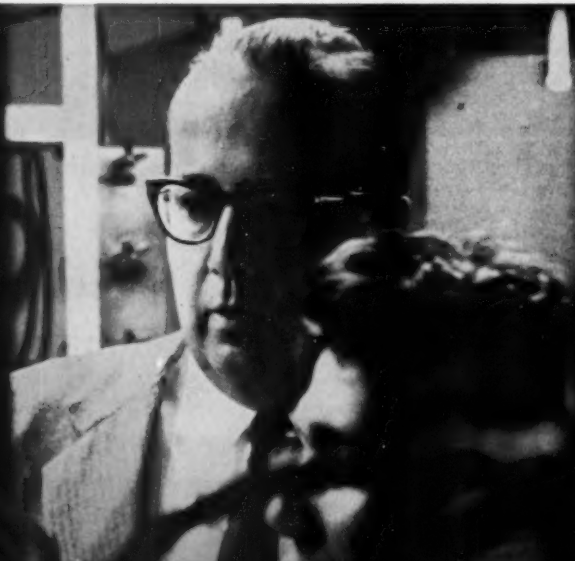


Arthur Reese, Vice President and General Manager
Communications Division

Three field commanders direct day-to-day activities of Motorola's technical divisions. Wheeler's Military Electronics Division concentrates directly on military problems, drawing on the resources of Reese's Communications Division (world's largest producer of two-way communication systems) and Hogan's Semiconductor Division (world's largest producer of power transistors and leader in mesa transistor development and production). Behind this technical task force stands Motorola's strength in consumer electronics; in an emergency the company's total complex of 18 plants in four states can be converted to mass production of military equipment.



Dr. Lester Hogan, Manager
Semiconductor Products Division



Of Motorola's 2,000 engineers and scientists, four out of five work under the direction of Dr. Daniel E. Noble, Executive Vice President. One of the three divisions under his command is devoted exclusively to military electronics; two others provide strong support. Working together, they form a

MOBILE TECHNICAL TASK FORCE

Officials of the Air Force Flight Test Center at Edwards faced a particularly knotty problem. Specialized microwave equipment was required to relay telemetry from aircraft in remote areas.

At the request of the military, Motorola rapidly assembled the talent and equipment of its tri-divisional technical task force. Heaviest contributions to the project were made by Motorola's Military Electronics Division. But important help came from other sources: microwave equipment and vhf receivers from Motorola's Communications Division; specialized transistor circuitry from the Semiconductor Products Division.

With this swift concentration of technical talent drawn from a diversity of company sources, Motorola was able to solve a major problem for the Air Force in record time.

Few organizations serving the military today can so rapidly merge diverse technical talents and productive capacities as can Motorola. Its three "task force" divisions, under the single command of Dr. Daniel Noble, can be marshalled almost overnight for the solution of urgent military electronics problems. Cross-fertilization of ideas and techniques is the certain result.

The success of this flexible organizational structure was again demonstrated by Motorola's part in the development of the Project Mercury Space Capsule. The Capsule's command control receiver, developed

by Motorola's Military Electronics Division, is the smallest all-transistorized radio receiver of its type available, thanks to mesa transistors developed by the Semiconductor Division and miniaturization techniques borrowed from packaging specialists of the Communications Division. In another instance, Motorola's Semiconductor Division developed the first samples of a new type of electronic facsimile paper with important military applications.

In an era marked by a chronic shortage of competent brain-power, Motorola's strategic deployment of its technical resources is an effective answer, both in the solution of current problems and in conducting long-range research.

Strategic deployment of manpower is only one of the reasons why Motorola is able to design, develop and produce military systems and equipment with speed, economy and reliability. Motorola's exclusive concentration in electronics, its cost-conscious approach to producibility, and its preoccupation with reliability, are evident in every Motorola military product, from the smallest solid state device to the most complex weapons systems.

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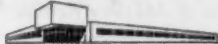
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THE ARMY'S MONTH

AGAIN, WE HEAR MUCH TALK OF THE NEED FOR MORE UNIFICATION

A little more than a year after the passage of the 1958 military reorganization law which was designed to strengthen the authority of the Secretary of Defense, tighten the command of deployed combat units and promote economy, responsible voices are again demanding an overhaul of the military establishment. Among the proposals:

Sen. Clair Engle (Dem. Calif.) would eliminate service designations, reorganize the Defense Department "functionally," abolish ARPA, and create a military applications division in NASA for military interests in space.

Sen. John Sherman Cooper (Dem. Ky.) would abolish the three service secretaries and re-create them as under secretaries of Defense, create a Director of Procurement in the Defense Department and give the Director of Research and Engineering more authority over service research.

A report by the House Committee on Government Operations suggests a study leading towards the merger of the Army and the Air Force.

By far the most ambitious of these proposals is that of Senator Engle. He has said that it would take at least five years to accomplish all of it but he would start by abolishing ARPA and by creating a military applications division in NASA. He acknowledged that the eventual result of his plan would be a single chief of staff.

In his address on the floor of the Senate, Senator Engle went into detail on some phases of his plan—including a summary of the plan of Col. Seymour I. Gilman which appeared in the April 1959 issue of *Military Review*. In listing some of the problems involved in a "complete integration of the military

services," Senator Engle mentioned the consolidation of the four promotion lists, personnel service numbers, service regulations, and the merger of the technical services—for example, the Army Engineers and the Navy Seabees.

He said that his idea of a functional reorganization would result in the creation of a retaliatory striking force, a limited war force, a continental defense, and a logistic command.

That at least semantic confusion is present whenever unification is discussed is seen in this exchange between Senator Symington and Senator Engle:

SEN. SYMINGTON. . . . Nobody wants to abolish any of the services. But they must be tightened up into one overall command. . . .

SEN. ENGLE. I agree with the Senator. I have been very careful to say that while we should abolish the present service designations, we must continue the same kind of basic activities we now have.

Despite the assertion of agreement, commonly accepted definitions suggest that on this important part of the problem of unification the two senators are quite a ways apart. There is quite a difference between Army, Navy and Air Force units under a

Mr. John J. Kerrigan of Newton, Pa., noting that the Army now has a radar that can tell the difference between a man and woman walking more than 600 yards away at night or in fog tells us:

I'VE GOT MY RADAR EYE ON YOU

"Lovely Phyllis just passed by; Although she was not seen, The wiggle of her hips was clear On the radar screen."

single commander and retaliatory, limited war and continental defense forces without service designations.

Senator Cooper has had little to say about his proposals. They appear to seek to increase the authority of the Secretary of Defense without disturbing the actual existence of the several services or the Joint Chiefs of Staff system.

The recommendation for a study of the possibility of merging the Army and Air Force appears in the concluding observations of a truly remarkably informative report on the organization and management of missile programs by the House Committee on Government Operations. The Committee's recommendation for the merger is couched in the terms of its findings in its investigation of the missile programs. It did not, as the report states, "consider the whole range of problems involved in military service unification," but it did find that "the strategy of land-based missile power cannot be divided into the conventional concepts of land or air combat." This, it believes, is enough to warrant further study.

(The Committee's report can be accurately called remarkably informative because of its factual, dead-panned, report on U. S. missile developments in the past six years or so. Anyone interested in the Thor-Jupiter controversy, the ICBM program, air defense missiles, and the separate capabilities of the Army, Navy and Air Force in ballistic missiles should read this report.

(Without once saying so the report contains probably the finest justification of the Army arsenal system that has ever seen print. It fully endorses the need by the services of an "in



FLIGHT TEST REPORT ON **THE BELL XV-3**

THE REVOLUTIONARY BELL XV-3 is the convertiplane that's surpassing expectations. Developed for the U.S. Army as part of the military's over-all VTOL program, the XV-3 has moved well beyond Bell's extensive shakedown tests... has successfully completed a thorough Phase II Air Force evaluation at Edwards AFB.

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The XV-3's fixed-wing, low disc loading configuration inherently provides higher hovering efficiencies, lower downwash velocities than other VTOL types. Now, recent tests have also confirmed superior stability and controllability in all flight regimes, higher efficiencies in airplane cruise.

Now shown to be technically and operationally practical, the XV-3 concept is ready for advanced military VTOL/STOL systems.

house" capability and demonstrates through case history that the lack of such a capability adds up to excessive costs and tends to create situations that are at odds with the best interests of the government and industry.

(For readers interested in obtaining a copy of this report its full title is *Organization and Management of*

Missile Programs; Eleventh Report by the Committee on Government Operations; Union Calendar No. 483, House Report No. 1121.)

Proposals for the reorganization of the Pentagon occur as regularly as the seasons which suggests that the perfect organization has yet to be found. This of course is true. But a great deal of study should be made before any of the proposals briefed here are adopted. The important question always is: "Will it work in war?" What profit is there to the United States if we develop a military organization of such streamlined efficiency that there is no more "controversy" and we save

\$5 or \$15 billions of the \$40 billions we are spending annually for defense—and thereby lose the next war? The essential thing is not to stop debate or to save money but to preserve a military organization that can wage war effectively and successfully.

We are living at a moment when our opponent exhibits the conviction that he can meet our every challenge and shouts that he is becoming measurably stronger than we. Khrushchev's challenges must be met boldly, but not recklessly. The stake is neither super-efficiency nor fiscal solvency, but security—the security of the United States.

"ABOVE THE BEST"—ARMY'S HELICOPTER SCHOOL AT CAMP WOLTERS LIVES UP TO ITS MOTTO

The Army Primary Helicopter School at Camp Wolters, Mineral Wells, Texas, recently held an open house at which its motto "Above the Best" underlined its superb safety record.

Since its first class was graduated in 1957, Wolters helicopter instructors and students have logged in excess of 200,000 total flying hours without a fatal accident. As of August 1959, only 66 accidents had occurred and only one of these required hospitalization. The school's 1959 accident rate per 100,000 flying hours was 37, far below the all-Army average of 51. In July of 1959, the school established a new record for itself, averaging only 24 accidents per 100,000 flying hours.

These amazing safety achievements are the result of a three-pronged effort to develop for the Army the finest helicopter pilots in the world. Camp Wolters itself, presently commanded by Colonel John Inskeep, is, of course, an integral part of this effort. Since its first class, Wolters has graduated over 1,800 students, including some from Germany, Canada, England, and Belgium. This year Wolters will extend its facilities and talent to students from Greece, Indonesia, Italy, Japan, and Norway.

The second part of this joint undertaking is Southern Airways Company, whose operations at Wolters are headed by General Manager Raymond L. Thomas. Southern, which has trained about 25,000 pilots under military contract, conducts the Wolters training and maintenance program. This year, Southern instructors will train approximately 1,000 students in Mineral Wells, most of whom will be officers either taking their first flight training or those who are making the transition from fixed- to rotary-wing aircraft.

The third key role in the Camp Wolters safety story is played by Hiller Aircraft Corporation, developer of the helicopters used for pilot training. Hiller's latest helicopter version, the H-23D Raven, will soon become standard, replacing its earlier counterparts, the H-23C and H-23B.

Camp Wolters became an Army installation on 1 July 1956 when then Camp Gary was transferred from Air Force to Army control. The Primary Helicopter School was organized in October 1956, the first effort to train military helicopter pilots under a civilian contract.

The results of that effort have been "Above the Best."



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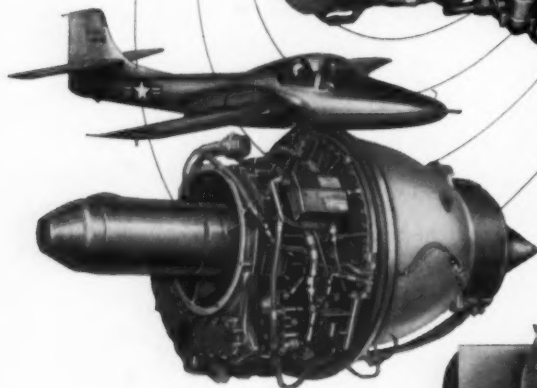
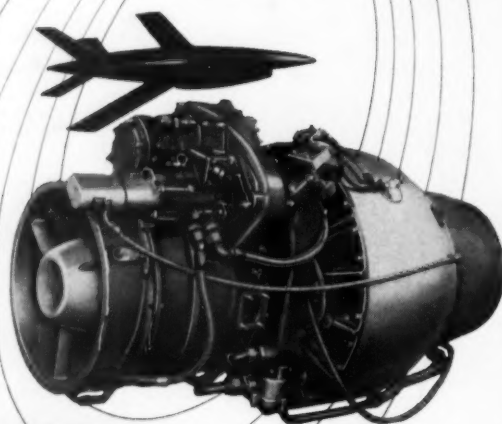
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Latest power plant for the Air Force T-37A twin-jet trainer manufactured by Cessna, the J69-T-25 has increased thrust to 1,025 lbs.

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1959 REUNION CALENDAR

October

11th Abn Div: 16-18 Oct. Hotel Commodore, Atlantic City, NJ. Write Louis Goran, 68 Lexington Ave., New York 10, NY.

45th Inf Div: 30 Oct-1 Nov. Skirvin Hotel, Oklahoma City, Okla. Write Richard M. Thomason, 2205 N. Central, Oklahoma City 5, Okla.

November

77th Inf Div: 8 Nov. Sheraton-McAlpin Hotel, NYC. Write Joseph H. Woolwich, 28 E. 39 St., New York 16, NY.

82d Div (WWI): Second, 8 Nov. Hotel Dempsey, Macon, Ga. Write James F. Brown Jr., 1005 Bankers Ins. Bldg., Macon, Ga.

90th Inf Div: 6-8 Nov. Kansas City, Mo. Write Samuel W. Fry, Tulsa Co. Court House, Tulsa, Okla.

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WE MUST GO NUCLEAR

The Fallacy of a

Colonel FRANCIS X. BRADLEY

THE mushroom cloud which formed over Hiroshima, and the scores of others which have formed since, have created a haze which has dimmed our view of the nature of war. Since 1945 we in the Army have talked of two types of wars: atomic and nonatomic. We say we need a dual capability, and must be prepared to fight either nuclear or non-nuclear battles. The fact is, however, our choice was made in 1945. We must go nuclear.

Discussions of the two types of wars have even led to the development of a new term, and we have come to describe wars that are less than total as limited wars. The development of the term is a natural one, for now for the first time the great nations of the world have the capability to destroy one another and to destroy other nations as well. By coining the term we have tried to contrast that capability with lesser capabilities.

The strong human desire to avoid the tremendous destructiveness of nuclear weapons is understandable and laudable, but the possible employment of these weapons remains an inherent part of the communist threat. To hope that the influence of nuclear weapons on relations between the United States and the USSR will lessen is mere wishful thinking. So long as they continue to be available their existence will continue to underlie every aspect of the struggle between the two countries and every major tension and disagreement between the two will provide the potential for a world holocaust. Every consideration for the use of arms by either nation must be approached

with the knowledge that such an act could lead to serious destruction to both.

This danger, grave though it is, can lead to the even more dangerous conclusion that a final showdown with the Soviets would bring on a catastrophe so horrible that we dare not risk it. Such thinking sets us up as suckers for Soviet bluffing, intimidation, and nibbling and could lead to piecemeal defeat. Caution is essential, but timidity could be disastrous.

Nuclear weapons are here to stay just the same as guns, airplanes, and missiles. To cite the fact that gas was not employed in World War II, as is often done, as evidence that nuclear weapons might not be used in the future is to me a superficial analysis. Gas was not used by the Germans because they could see no advantage in it.

Until the Fall of 1940, the time of the air battle over Great Britain, it was not necessary for the Germans to even consider chemical warfare. After they lost the air battle, it was too late. Had it been used, it would undoubtedly have hastened the defeat of the Nazis. As Churchill said at the time, "The enemy may use gas, but if so it will be to his own disadvantage." Who doubts that Hitler would have used chemicals or biologicals if it would have brought him victory? He did not hesitate to use rockets on London. Certainly, he was not stayed by moral considerations.

The advent of nuclear weapons has raised the stakes

The advent of nuclear weapons has had the same basic effect on conflicts between nations as has every other major advance in weapons: it has raised the stakes. To be sure, this raise has been in a new order of magnitude, almost beyond comprehension. However, the effect is basically the same. To hope that nuclear weapons can be eliminated is like wish-

Colonel Francis X. Bradley, USA, retired, served in the Antiaircraft Artillery and Infantry during his Army career. He retired from the Army on 31 July and is now with The Martin Company, Baltimore. His last Army assignment was Chief of the Editorial & Pictorial Office, The U. S. Army Infantry School.

Dual Capability

ing that gunpowder had not been invented. They both exist and we must be ready to use them so long as other nations possess and can use them on us.

In a war involving the United States and the Soviet Union, we must, for the present at least, use nuclear weapons or accept defeat. During this period when the Russians have an edge in conventional forces, we cannot afford to consider nonnuclear war. It has been said that limited wars are the only types of war the United States can afford. Unfortunately, however, the Soviet Union can afford limited wars—particularly nonnuclear limited wars—even better than we can. At the present time the only type of war the Russians cannot afford is nuclear war.

The irony of our present dilemma is that the security of our nation and the insecurity of our nation both stem from the existence of nuclear weapons. Without them, we cannot today contain the Russians. With them, we fear that we might trigger a catastrophe which would cause our own destruction.

This dilemma cannot be avoided. We must prepare to use nuclear weapons whenever it is to our advantage to do so. To do otherwise would tempt the Russians to use them and would leave us vulnerable to defeat on the battlefield or to defeat through blackmail and intimidation. The less we prepare for their use, the more vulnerable we are and the more the Soviets will be tempted to use them.

So long as we are inferior to the Russians in conventional forces, we dare not agree to a prohibition of nuclear weapons. This would seem to lead to the conclusion that, if we wish to avoid the use of nuclear weapons without at the same time inviting defeat, we must gain superiority in conventional forces. This conclusion, however, raises still another difficulty, for if we were to increase our conventional forces to a point where we could defeat the Soviets without

nuclear weapons, then they could resort to nuclear weapons to overcome our conventional advantage, unless we also had a clear-cut superiority in nuclear weapons.

Why try to plan for two separate types of war?

This might well be called the "Maxim of Comparative Advantage." In war, a nation can be reasonably expected to accept limitations—in weapons, in intensity, or in area—only if the extension of them would accrue greater relative advantage to its enemy.

The application of this truism suggests that we must be superior to the Russians in every possible type of warfare. We could then hope to limit a war with the Soviets to conventional weapons, since the introduction of nuclear weapons into the conflict by Soviet forces would be disadvantageous to them. This reasoning can, of course, be carried to absurdity. For, if the maxim holds—and I believe it does—why not go one step farther and in addition to achieving superiority in nuclear and conventional weapons, also gain superiority with more primitive weapons? Then, theoretically, we could hope to fight a war with axes and lances and avoid the destructiveness, not only of nuclear weapons, but of conventional explosives as well.

This, of course, is ridiculous. It must be our policy that we will use the most effective weapons we have whenever it is to our advantage to do so. This is just plain common sense, and we must stop wishing that we could turn back the clock. If we do not make this choice, we permit an enemy to make it.

The Soviet leaders revel in our predicament. They know we are not their equal in nonnuclear forces or weapons. Their constant shouting to "ban the bomb" is more than propaganda; they really mean it. They know that without nuclear weapons, we cannot de-

fend Western Europe, the Middle East, or Southeast Asia. And they know, too, that we cannot halt determined communist military aggression in the land areas contiguous to the communist empire with a policy of nonnuclear war.

In the face of all of this I cannot understand why we continue to talk about the need for a dual capability, and why we try to plan for two separate types of war. The fact is that we can never again go to war with a major power and dispose our forces or conduct our operations as we would for a conventional war.

Atomic weapons are a means of providing massed firepower. Until their development we had to rely upon concentrations of artillery or waves of aircraft to do the job. We have never tailored our forces to fight without aircraft or artillery. Why then, consider a war without atomic weapons? We do not prepare one doctrine for war with aircraft and artillery and one doctrine for war without aircraft and artillery. When we have not needed heavy bombers and great concentrations of artillery we have not used them. We must do the same with nuclear weapons. We must plan for their use and count on using them whenever and wherever they are more effective than other weapons.

Does destructiveness determine the morality of a weapon's use?

We cause trouble for ourselves when we use emotional words like "mass destruction" and "nuclear holocaust" to describe the effect of nuclear weapons. We speak as though conventional weapons were always used with morality and discrimination and as though the use of nuclear weapons always meant just the reverse. The many leveled cities in Europe during World War II and the widespread devastation caused by the fire bomb raids on Japan are convincing evidence of the fallacy of this. It is a matter of record that one night of bombing destroyed a larger area of Tokyo and killed more people than did the atomic bomb which exploded over Hiroshima or the one over Nagasaki. Would we think of bombing enemy cities with waves of new bombers and missiles carrying nonnuclear explosives? Mere cost should rule this out. Do we mean to imply that morality depends more upon the number of weapons employed than upon the number of people killed and maimed?

It is not destructiveness alone that determines whether a weapon is moral or discriminatory. The accuracy of the delivery system and the aim and intention of the gunner or bombardier are more important factors. Inherently, weapons have neither a power of discrimination nor a standard of morality.

The wide area of destructiveness caused by a particular weapon or the inaccuracy of a delivery system will make discrimination more difficult, but it is the way man uses the weapon and the target that he directs it toward that really determine discrimination or morality.

We can expect to use nuclear weapons with some discrimination just as we can use conventional weapons with discrimination. In fact, in some instances the use of a single low-yield atomic weapon may permit far greater discrimination than the mass use of conventional artillery or bombers to do the same job. This is possible even with the nuclear weapons and delivery systems which are available today. As new developments are made, this capability will increase.

Our desire to cling to our old weapons and concepts while also wanting the new ones is not unique. Military leaders have always been reluctant to abandon reliable weapons and concepts and have been hesitant about changing rapidly to less familiar ones. In support of the 1939 budget—1939 was the year the Nazi panzer units swept through Poland—the Army's Chief of Staff had this to say about the horse: "A certain amount of mounted cavalry we must always keep. There are many circumstances where it is essential and where mechanized cavalry cannot take its place."

The advantages of the new are offset by the burdens of the old

Today more than fourteen years after the development of nuclear weapons many military leaders are still arguing that we must have the capability of fighting large scale wars without nuclear weapons. Our service schools are presenting some problems of large scale operations in which we do not employ atomics. Our world-wide supply system is geared to support World War II type operations based upon World War II ammunition expenditure rates with a nuclear supply system added. Our reserve forces are prepared for a World War II type mobilization program. Our ammunition stockpiles are designed to support two separate types of war: atomic and non-atomic.

We can't afford this. It contains the seeds of defeat. If we try to retain all types of weapons and equipment, we will dissipate our funds and our strength by expending them on those that are outmoded. We cannot afford to hedge by having both the old and the new. If we try, we shall find ourselves with only half enough of the new.

We must recognize that nuclear weapons are a revolutionary breakthrough. They place in the hands

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of our soldiers the ability to deliver firepower in a magnitude previously undreamed of. The army that first develops an operational concept which makes full use of this tremendous firepower and the accompanying logistic advantage will rule the battlefields of the future. Think of the logistic savings when a single atomic round will do the job of hundreds of truckloads of conventional ammunition. Think of the effect on operations when a single atomic round makes a large scale attack on a strongly held hilltop unnecessary. If we try to prepare for a World War II type operation using conventional ammunition and at the same time prepare for a large scale war with atomics, the savings are lost. It is like changing from horse transport to motor transport and keeping the horses too. The advantage of the new is offset by the burden of the old.

Soviet armed forces do have a dual capability, but this is not because of doctrine or organization. It derives from their great strength in numbers. We too have a dual capability compared to the weak nations of the world and for the same reason.

It is the great military strength of the Soviet Union which demands our attention. If our nation is ready to meet this military challenge, and can defeat the armed forces of the communist nations on the battlefield without having to resort to the complete destruction of those nations, then, at the same time, we will be ready for all lesser military threats. *It is only when our armed forces are incapable of defeating enemy armed forces that we need resort to the destruction of his homeland in an attempt to achieve decision.* For the present, we need concern ourselves primarily with those wars which might be fought against Soviet forces. If we are prepared to defeat those forces on the battlefield, then as a by-product we and our allies will be prepared to defeat the forces of any other nation or combination of nations.

***Not every shot fired by
us need be a nuclear round***

This does not mean that every shot which is fired must be nuclear. That would be absurd. Nuclear weapons are not a substitute for all other weapons. They should be used only when we need great firepower; firepower which heretofore could be provided—and to a much lesser degree—by massed artillery or by large formations of aircraft. Atomics will never replace the aimed fire of a rifleman, or the club of a military policeman.

It would be fatuous to mass artillery fires as we did in World War II when a single atomic round could do the same job more effectively, more cheaply, and with greater discrimination. This means that we

must never again expend large numbers of American soldiers to assault a strongly held hill, island, or fortification when we have weapons that will do the job. It means that we must reject all thought of hitting an enemy airstrip again and again with high explosives when one atomic weapon can knock it out and keep it out. It means that we must stop stockpiling conventional ammunition for a corps TOT when a single "nuke" will do.

There has been some confusion about whether you can win the small war if you prepare only for the large one. Up until recently there was no reason to raise the question, for it was quite clear that the nation that could win the large war could also win the small one.

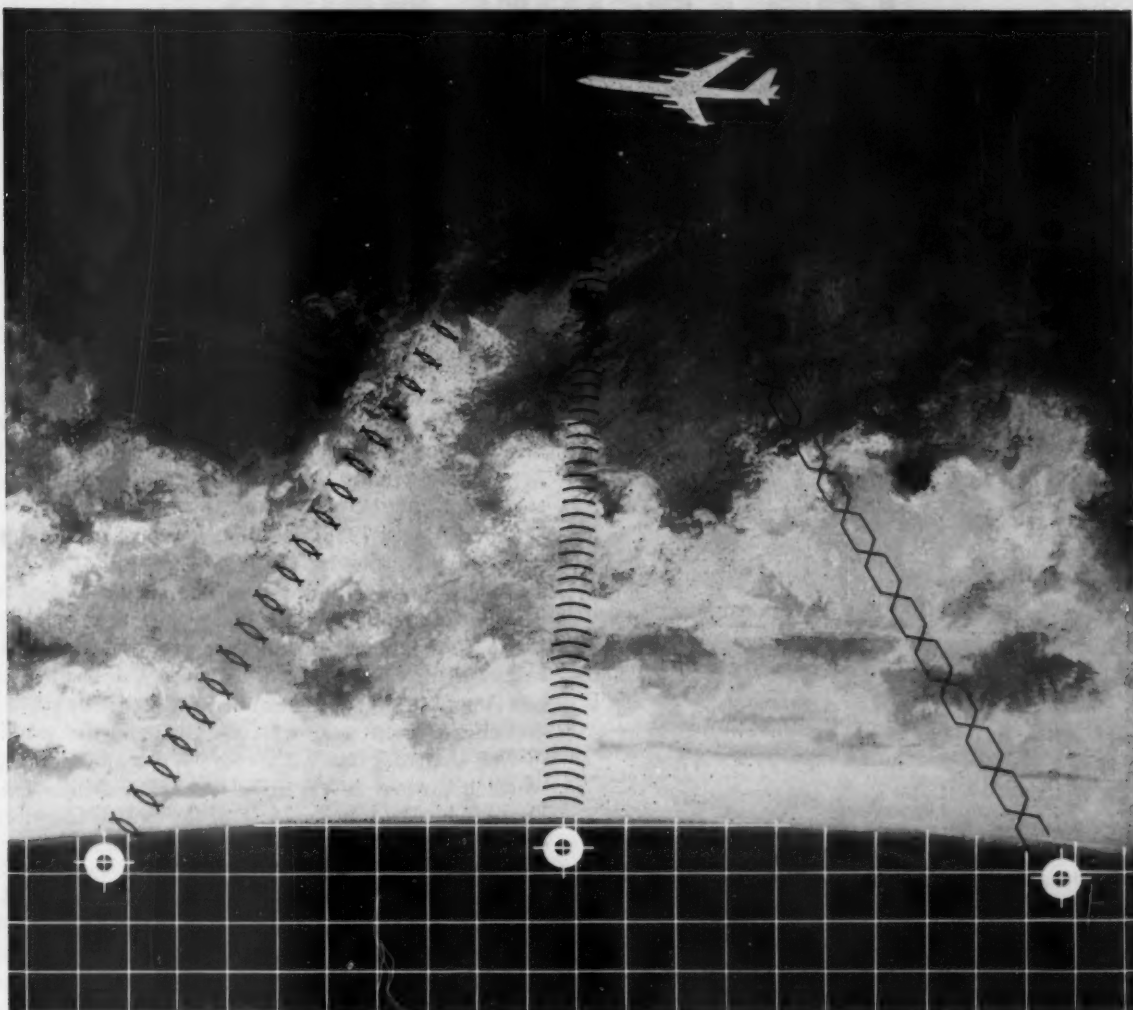
It seems logical that if we can defeat the armed forces of a strong enemy we can also defeat the armed forces of a smaller, weaker enemy. It also seems logical to conclude that if the armed forces of an enemy can be defeated on the battlefield there is no reason to resort to strategic attacks on his population centers, particularly if he has the capability of retaliating against ours. Of course, there is no certainty that he will not attack ours anyway, and it is essential that we always have an overwhelming retaliatory force of our own in an attempt to deter him from such an attempt.

But this doesn't mean that we must prepare for two kinds of war. In any war, we must use the most effective weapons available to us, whenever and wherever it will be advantageous to us. In local conflicts, if atomics are unnecessary, we shouldn't use them. If we are called upon to help suppress rebel communist forces in a friendly country, we must do so without destroying the nation and people we have come to save. On the other hand, if the operation requires massed firepower and a single atomic round can do the job most economically and effectively, we must use one. Because we plan to use nuclear weapons does not mean that we always have to use them. In the past, we did not employ all the weapons in our arsenal in minor conflicts, nor did we use heavy artillery to settle civil disturbances or quell rioters. We can do the same in the future, even though we prepare the Army for nuclear war.

Our need is for many weapons; weapons we can use in many combinations. We need not speculate as to whether nuclear weapons will be used in a war between the US and the USSR. The choice is ours.

When we can defeat the Soviet armed forces on the battlefield, using whatever weapons are most effective, we will have achieved all the dual capability we need. At the same time, we will multiply our chances of not having to resort to force of arms at all.

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The Leclerc Prize

Lieutenant JAROLD L. HUTCHISON



The bust of Leclerc de Hautecloque, Marshal of France, signifying the 1958 championship in small arms among the armies of NATO was presented by USAREUR Commander-in-Chief General H. I. Hodes to the American team captain, First Lieutenant Jarold L. Hutchison, 1st Battle Group, 34th Inf., 24th Inf. Div. Lieutenant Hutchison led his team to victory over six other NATO teams to earn the trophy.

A TYPE of competitive marksmanship known to too few persons in the United States has caught fire in the United States Army in Europe. It is known as the "Leclerc Prize" and it seeks to approximate, as nearly as possible, combat firing with three small-arms weapons.

On 22 August 1958, the United States Leclerc team, represented by the 1st Battle Group, 34th Infantry, dominated and won this competition, established a new Leclerc scoring record, and gave Uncle Sam his fourth international championship in the eight-year history of the Leclerc small-arms competition. In the best American tradition the American doughboy proved himself the finest small-arms marksman in the world.

The Leclerc Prize is the development of an idea which originated in the mind of Henry Millington-Drake, when he was President of the British Chamber of Commerce in Paris, in 1907. At that time, he proposed and presented a Challenge Cup to the French Army which was to be given as an award for competitive marksmanship competition. The only stipulation governing the match was that it must be a true test of military marksmanship; that is, that it require the competitor to exert athletic or physical effort prior to engaging his target. It remains the basis of the competition today.

In 1949, for reasons of economy, the competition was limited only to French regiments stationed in Germany. This circumstance gave Sir Eugen Millington-Drake, Henry's son, and General Chevillon, a French officer, the idea that the competition be expanded to include all the armies of the Western nations. Regulations were drawn up by a special committee appointed by the Directors of Training in the Western European Region. Sir Eugen, formerly a Minister in Her Majesty's Foreign Service, requested that he be permitted to offer a trophy which would be called the "Leclerc Prize" and proposed that this trophy take the form of a bronze bust of Marshal Leclerc, thus preserving the memory

Lieutenant Jarold L. Hutchison, Infantry, a member of the 1st Battle Group, 34th Infantry, was team captain of the 1958 NATO championship Leclerc team.

and example of the great French military leader. In 1951 the Allied Land Forces in Europe competed for the Leclerc Prize for the first time.

Leclerc was the pseudonym of Philippe Vicomte de Hautecloque, a 1924 graduate of Saint Cyr, the West Point of France. During World War II he changed his name to Leclerc to avoid reprisals against his wife and children who were still in Nazi-occupied France. At this time Leclerc was a member of General DeGaulle's "Fighting French" and he first came to the attention of the world when he marched his forces from Fort Lamy, near Lake Chad in French Equatorial Africa, to unite with Field Marshal Montgomery's Eighth Army at Tripoli on 25 January 1943. This advance carried Leclerc's forces some 1,600 miles across the Sahara in only 39 days.

Returning to England, Leclerc was given command of the Free French 2d Armored Division which had been formed in North Africa. The Normandy Invasion found him a general and leading the division into France and receiving the surrender of Paris from the German commander on 25 August 1944.

After the war, General Leclerc took the necessary steps to adopt the name he had assumed. He later became the Governor of Strasbourg and Commander-in-Chief in French Indochina. In 1946, he was appointed General D'Armee, but before he was able to exercise such a command he was killed in an airplane accident in North Africa in 1947. The French Government posthumously named him a Marshal of France in 1952, thus forever preserving his name among the military immortals of France.

The course of fire has been modified several times since the British won the first international match in 1951. Each modification has been one that created a more realistic match in keeping with the original intent—to fire a simulated combat course. In 1958, the organizing committee (composed of one representative from each competing nation) specified that each team was to be composed of 24 firers. These were further organized into 12 riflemen, 10 light machine gunners (five teams of two men each), and two pistol shooters. Two competitors on each team were required to be officers and 15 of the remaining enlisted men were required to have less than a total of two years' service. This team composition will remain the same for the 1959 International Match.

The course of fire in 1958 is explained in the following description of the match.

Rifle Practices

Practice 1—300 yards. Prone. Two sighter rounds in two minutes followed by eight rounds in eight minutes. The sighter rounds are not scored. Possible score: 32.

Practice 2—300 yards. Prone. Eight rounds. The practice starts on the 400-yard line with the competitors on the ground in the prone position. When the targets appear, the competitors double time to the 300-yard line, assume the prone position, and fire eight rounds.

The targets are exposed for only 60 seconds. Possible score: 32.

Practice 3—300 yards. Prone. Two sighter rounds followed by eight rounds. The sighter rounds are not scored. Targets are exposed four times for six seconds. On each exposure of the targets, the competitors must fire two rounds. Possible score: 40.

Practice 4—Eight rounds. Competitors start at the 450-yard line in the prone position. On the appearance of the targets they double time to the 400-yard line, assume the prone position and fire two rounds. The targets are withdrawn. When they reappear, the competitors run to the 300-yard line, assume the prone position and fire two rounds. In the same way, they run to the 200-yard line to fire two rounds sitting or kneeling, and then on to the 100-yard line where they fire their last two rounds in the standing position. Targets are exposed for 45 seconds and drawn for 15 seconds. Possible score: 32.

LMG Practices

U. S. teams fire the Browning automatic rifle in these practices.

Practice 1—Each weapon is manned by a two-man team. Each member of the team fires 10 rounds as warmers and 20 rounds in one magazine for record. The practice starts with the team on the 500-yard line in the prone position. On the appearance of the targets, the teams run to the 400-yard line where the first gunner fires his magazine. The targets are withdrawn after being exposed for 70 seconds. On the reappearance of the targets, the teams run to the 300-yard line where the second gunner fires his magazine in the same time period. Possible score: 120.

Practice 2—One magazine of 20 rounds for each member of the team from the 300-yard line. When the targets appear, each team has 24 seconds to fire its magazine. This is done twice, once for each member of the pair. Possible score: 120.

Highest possible score, all LMG practices: 240.

The 1959 course of fire has amended the above in an effort to cause the gunner to fire in bursts instead of in single rounds. The rule changes are as follows: *Practice 1*—30 rounds (two magazines of 15 rounds each) for each competitor. Firing time decreased to 60 seconds. Possible score: 180. *Practice 2*—30 rounds (two magazines of 15 rounds each) for each competitor. Firing time increased one second to 25 seconds. Possible score: 180. Highest possible score, all LMG practices: 360.

Pistol Practices

Practice 1—30 yards. Six rounds. Competitors start five yards behind the firing point. At the first whistle, they move to the firing point and prepare their weapons for firing. On the second whistle they fire six rounds in three minutes. Possible score: 36.

Practice 2—20 yards. Six rounds. The same as for practice one, but the time limit is 20 seconds. Possible score: 36.

LECLERC RECORDS

Highest Possible Score 1951-57—2,472

Highest Possible Score 1958—3,120

Year	Positions	Teams	Scores
1951	1	British	
	2	United States	
	3	Norway	
1952	1	Netherlands	
	2	British	
	3	Belgians	
1953	1	United States	1,643
	2	British	1,631
	3	Netherlands	1,599
1954	1	United States	1,884
	2	British	1,638
	3	Belgians	1,629
1955	1	United States	1,977
	2	French	1,863
	3	Belgians	1,829
1956	1	French	2,092
	2	United States	2,029
	3	British	1,958
1957	1	French	2,073
	2	United States	1,950
	3	Netherlands	1,858
1958	1	United States	2,638
	2	French	2,564
	3	Netherlands	2,470

Practice 3—10 yards. Six rounds. The same as for practice one, but the time limit is 10 seconds. Possible score: 36.

Practice 4—10 yards. Six rounds. The same as for practice 1, but each competitor will have three targets to fire at, each separated by two targets' width. Each target to be fired at twice. Time limit is six seconds. Possible score: 36.

Highest possible score, all pistol practices: 144.

Demanding course

As outlined above, this course of fire is certainly more demanding of the individual competitor than is any other competitive course of fire conducted in the Army today. The course itself is not the only difficult part of the competition. Coupled with the actual course of fire, each competitor is required to abide by certain rules governing the actual firing. First of all, he must wear his normal battledress including his steel helmet, his cartridge, pistol or automatic rifle belt with canteen, first-aid pouch, bayonet, poncho, and combat boots. Along the lines of dress, no competitor is authorized to wear any type of shooting jacket or shooting aid. Gloves are not permitted.

The competitor's weapons must be strictly government-issue items which have not been modified or altered in any way. National Match type weapons and

those equipped with telescopes or other sniper equipment are not authorized. The sling, normally carried on the weapon, must be attached according to regulations, but it cannot be worn or used as a means of steadying the weapon. The use of the sling is considered an artificial support of the weapon which is forbidden in these matches. In addition to the foregoing rules, there is no allowance made for faulty ammunition or misfires, stoppages, or weapons malfunctions. Shooters may, if they are able, repair any stoppage or malfunction of the weapon in an attempt to resume firing and complete the practice. This is a further test of the individual's professional ability as a military marksman.

Another major consideration in the conduct of the firing is that each competitor is accompanied and observed by a noncommissioned officer who acts as an umpire. This NCO umpire insures that the firer observes all rules and regulations governing the match, such as firing in the correct position, applying the safety catch when not actually firing, firing the correct number of rounds, and firing only when allowed to do so.

Unique targets

The target itself is unique in that it is used for only the Prix Leclerc competition and for no other type of firing. The upper half of the rifle and LMG targets is light grey and the lower half is ochre, or pale yellow. The bull's eye on these targets is, in effect, a semi-bull since only the upper half of the circle is black. Thus, the competitor observes a target of which the upper portion represents the sky and the lower portion the earth or ground. He can also see in the center of his target a black object which appears to be his enemy's helmet.

The pistol target is ochre and in the form of an enemy's silhouette. Such targets, to say the least, require a greater degree of accuracy on the part of the shooter than most conventional targets.

The Leclerc Matches, as originally intended, still require the competitor to exert physical effort during the conduct of his firing. The course is based upon time-tested skills which must be found in every soldier—physical conditioning, the ability to engage and destroy his enemy, a thorough knowledge of his weapon, and foremost—mental alertness. No one can consider himself a good Leclerc marksman unless he is capable of thinking under match conditions, that is, under the watchful eye of the NCO umpire. The ability to think under these slight pressures may go a long way toward relieving some of the "frictions" of actual combat.

Major General Ralph C. Cooper, Commanding General of the 24th Infantry Division, which produced the winning 34th Infantry Team in 1958, comments: "This is the finest competitive shooting for the military man in the world today. The combat training value of the competition is greatly enhanced by the facts that the shooter must wear battle dress, must fire with unmodified issue weapons, and must compete over a course requiring a high degree of physical stamina."

"We can't fight a 100-year war
with a year-to-year approach"

The Future of Military Aid

Lieutenant Colonel MISCHA N. KADICK

A DISTINGUISHED American, wise in the intricacies of both Government and private enterprise, after listening to an explanation of the procedures governing the current administration of the U. S. Military Assistance Program, remarked that "It's just too complicated for people." Though made partly in jest the remark had overtones of despair, for the organization and administration of our mutual assistance programs, particularly the Military Assistance portion, as handled today, is indeed one of the most complicated and confusing projects being administered by our Government.

There is more than a coincidental similarity between this remark and the reactions that follow the attempts of the average layman to appraise the merits of the policy issues underlying the Mutual Security Program by examining the cold record of the public debates that have taken place. The latest and probably the most intense debate since the inception of the program, though it has revolved in great measure over the question as to whether military aid or economic assistance should get priority has as in the past tended to become too preoccupied with isolated mistakes that have been made in implementation and in the entangling web of administrative complexity to the point of diverting popular attention from the fundamental objectives that have been and are being attained.

The President's Committee to Study the Military Assistance Program has rendered an unprecedented service to the government by sorting out the facts and issues pertaining to this vital feature of our national policy, in which the Army plays a predominant role. It has placed the program in perspective for public understanding and has recommended to the President certain courses of action that must

be taken by the Executive Branch to improve the effectiveness of the program.

The Draper Committee was appointed by President Eisenhower on 24 November 1958. In addition to its chairman, Mr. William H. Draper, former Under Secretary of the Army and U. S. ambassador, this non-partisan committee includes the following members: Mr. John J. McCloy, former Under Secretary of War, U. S. High Commissioner to Germany, and President of the World Bank; Gen. Alfred M. Gruenther, former Supreme Commander of NATO; Admiral Arthur W. Radford, former Chairman, Joint Chiefs of Staff; General Joseph T. McNarney, former Commander of U. S. Forces in Europe; Joseph Dodge, former Director, Bureau of the Budget; James Webb, former Director, Bureau of the Budget; Dillon Anderson, former head of the NSC planning staff; George McGee, former Assistant Secretary of State and U. S. Ambassador to Turkey; and Marx Leva, former Assistant Secretary of Defense.

The President requested the committee to undertake a completely independent, objective, and non-partisan analysis of the military assistance aspects of our Mutual Security Program. The President stated that the study should take account of the many highly significant technological, economic and political developments since the origin of the present Military Assistance Program. The Committee was asked for a forthright evaluation of the extent to which future military assistance can, by strengthening our friends and allies, advance U. S. national security and foreign policy interests. A critical appraisal also was requested of the relative emphasis which should be given to military and economic programs in less developed areas.

Past accomplishments—Do we seek survival in isolation?

Any evaluation of the Military Assistance Program must necessarily be made against the background of its past accomplishments and the history of its administration. The U. S. military assistance to selected foreign military forces

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is an integral part of the military defense of the United States. Without this program, the free nations of the world not only would have been unable to make their contribution to the collective security but many would not be free today. With our assistance they have been able to build the modern forces necessary to their own defense against limited aggression and thus provide the shield behind which they can build their economies and develop their resources.

In its first interim report to the President, the Committee said the issue is whether we intend to seek survival in isolation. This would be the inevitable result if we fail to continue a vigorous program of mutual security. A sharp reduction in our current level of assistance could have tragic consequences in the east-west balance.

The Committee expressed the further conviction that now that the United States no longer has a monopoly of long-range nuclear weapons, any weakening of our support to outlying allied positions makes the danger of local aggression even greater, and accordingly the Military Assistance Program becomes even more essential to our security.

The Committee submitted its first interim report as a preliminary appraisal for use by the White House in presenting the FY 60 Mutual Security Program to the Congress. A second interim report was submitted early in June on the "Organization and Administration of the Military Assistance Program." Recognizing early in its deliberation that the military program could not be assessed in isolation the Committee devoted a comparable effort to a study of the economic program and as a consequence developed and forwarded to the President in July a third interim report consisting of an analysis and recommendations on the subject of economic assistance programs and administration. These interim reports will serve as the basis upon which the Committee in its final report, not published at the time of this writing [it has since been released to the public], will provide considered views on "The relative emphasis which should be given to military and economic programs, particularly in the less developed areas."

There are approximately 7,900 military personnel stationed overseas implementing the Military Assistance Program. This number includes approximately 5,000 Army officers and enlisted men on duty with MAAGs and missions in more than 40 countries throughout the Free World. This does not include the many staff officers and civilians devoting all their time to military assistance problems in the Office of the Secretary of Defense, the Joint Staff, the Military Departments and in Unified Commands headquarters. There are few senior army officers who have not had experience with the Military Assistance program. As the concepts and recommendations contained in the Draper Committee's second interim report on the organization and administration of the military program becomes progressively implemented, priority for assignment to this type of duty will increase. These concepts and recommendations include a positive thrust forward to advanced planning, a forceful move toward maximum decentralization of responsibility to the Unified Commands and the Country Teams,

strengthening of responsibility and coordination, streamlining of Washington procedures, and a reorientation in the philosophy of implementation to include increased command supervision. It is this report of the President's Committee, with which President Eisenhower has agreed, that is of the greatest interest to the Military Departments.

A great part of the administrative problem stems from the fact that it has been a year-to-year program. President Truman's request in March 1947 for military equipment and training missions to Greece and Turkey, although made on an emergency basis, marked the beginning of what has in fact been a continuing foreign military aid program. Its continuation in the subsequent years has been stimulated by the ever developing series of crises that led to the signing of the North Atlantic Treaty in April 1949; the aggression from North Korea in June 1950, probably the most decisive stimulus of all to Western rearmament; and the succeeding emergencies that have occurred since that time. In each case, with the immediate crisis over, it was assumed that the program would be stopped.

This compulsion of response to emergency has been modified in its impact on the program by factors such as the estimated and realized increase of self-sufficiency on the part of our NATO allies, variations of Soviet foreign policy, the urge for economy, and varied criticisms by the Congress, the public and agencies of the governments. The fluctuation of sentiment between the extreme on the one hand of urgent response to emergency, and strong pressure to sharply reduce, and, indeed, entirely curtail the program on the other, has had the consequence of giving the program a self-conscious unease which has been reflected to a great degree in the manner in which it has been administered.

Criticism: Improved planning and coordination between Departments

The Draper Committee took cognizance of the many criticisms that have been directed at this problem. Under the guidance of General McNarney a task force of the Committee's staff spent months in sifting the facts. Based on this research the Committee concluded that fundamental modifications are now needed in the management of the program. These changes are dictated by the necessity to remove weaknesses and by the necessity to re-orient the planning and administration of our foreign aid programs to meet the requirements of the "long haul." As Mr. Draper stated at a White House press conference following release of this report: "We can't fight a 100-year war with a year-to-year approach."

Two of the Committee's recommendations, providing for a continuing authorization of military assistance and appropriating for military assistance as part of the Department of Defense Budget, require legislative action. The remainder of the principal recommendations largely pertain to administrative actions which can be taken within the Executive Branch without additional legislative authorization.

The Committee's report on the organization and administration of the military assistance program details with

preciseness proposals for a reorientation of the program. The recommendations are implementable and herein lies the report's greatest contribution to future success of the program.

The Committee expressed the conviction that the key to the successful administration of the program lies in the first instance in an effective working relationship between the Departments of State and Defense. It considers these two basic concepts to be essential:

The strengthening of the position of the State Department on the policy level of military assistance planning and increased assurance of the conformity of the Military Assistance Program to foreign policy and to related assistance programs.

Focusing of responsibility on the Department of Defense for the planning, programming and execution of military assistance within the framework of policy guidance provided by the National Security Council and by the Department of State.

It was found that the spirit of these concepts has often been missing and that both Departments have tended to exercise their responsibilities at the working level in a "contentious" rather than a completely cooperative manner and without an adequate exchange of information. In giving effect to these two basic concepts the Committee recommended a twelve-point program providing that:

Military assistance be planned and programmed on a long-term basis, covering a period of three and ultimately five years.

There be a continuing authorization for the military assistance appropriation, in order to provide a sound legislative framework for multi-year planning and programming.

The military assistance appropriation be placed in the Department of Defense budget, in order to center responsibility of administering the program.

Military assistance plans be formulated within order of magnitude dollar guidelines to ensure feasibility and approved by the Secretaries of State and Defense.

The Department of State and affected Ambassadors participate at an earlier stage in the development of military assistance plans.

Military assistance planning and programming be further decentralized to the United States Unified Commands overseas and to the Military Assistance Advisory Groups. Provisions be made for more adequate consultation with recipient countries during military assistance planning.

The Department of Defense have clearer operational responsibilities for planning, programming and execution of military assistance.

The Executive Branch should make funds for the procurement of military assistance matériel available to the military departments more promptly after appropriation and the military departments should accelerate procurement and supply actions.

There be established within the Defense Department an independent evaluation staff.

There be established within the Defense Department a Director of Military Assistance.

Highly qualified and experienced personnel be assigned to the program.

The Committee has recommended that there be established in OSD (ISA) an operating "Director" of Military Assistance who would have full responsibility for the operation of the program and would be directly responsible to the Assistant Secretary of Defense (ISA). The Committee, after careful consideration, recommended that this Director, at least initially, be a high ranking military officer. The program is essentially a military one and its planning and

implementation will be accomplished in the main by military people. Changing the orientation of the program to an advanced planning basis and decentralizing responsibility to a much greater extent will result in a new relationship between the Office of the Secretary of Defense, the Joint Chiefs of Staff, the Military Departments, the Unified Commands and the MAAGs. The development of this new relationship would be greatly facilitated by having a military officer as director at the outset. A military director would be in a position, additionally, of exerting great influence on the appropriate selection and utilization of personnel for the program, a problem which has become increasingly important.

Military aid—bulwark the long-range interests of the U. S.

The scope and purposes of our Military Assistance Program have changed markedly since the program was begun some ten years ago as a hastily instituted series of measures to meet Communist aggression in specific areas. We now provide assistance to nations that are definitely threatened with aggression or subversion and from mere reaction to overt actions our policy has developed into one of building collective security. It has become, therefore, a bulwark of the long-range security interests of the United States.

At the same time that this concept was changing, the nature and character of our Military Assistance Program have undergone significant change. Our early programs consisted largely of shipments of conventional weapons drawn from post-World War II stocks. Today, to meet the needs of a proper Free World defense posture, new weapons having varying degrees of complexity appropriate to particular areas are required. Since many of the threatened Free World nations are not capable of producing and paying for essential weapons, there is a definite need for military assistance. In order to provide this aid on a timely basis it is necessary to project our planning on a longer range basis than has been accomplished heretofore.

The serious deficiencies in planning and execution that exist today must be corrected if military assistance is to make its maximum contribution. Our programs must be administered with increased speed and greater flexibility, and this can be done effectively under our democratic processes. In this connection there is an urgent need to administer the program so that aid can be provided on a selective basis in timely anticipation of threatened aggression and responsive to the needs of the recipient countries. Without this concept of selectivity and without a continuing reappraisal and evaluation, there is a danger that such programs tend to continue simply through their own existing momentum beyond the period of their real need.

Finally, the Draper Committee in submitting its recommendations to the President on how to improve the administration of the Military Assistance Program was motivated by one consideration above all others. Unless the improvements urged by the Committee are made we may continue to be so fascinated with our own mistakes, and by using foreign aid as a whipping boy, we may gradually choke this vital feature of our national security policy to death.

The 8-Ball

EXPRESS



SECOND Lieutenant Melvin (Skip) Shipp, Infantry, ignored the pile of papers on his desk and swiveled his chair around to face the open window. Outside in the blazing sun a sergeant drilled a straggly line of recruits. His grating voice came shimmering through the air, slightly distorted by wandering breezes: "Hup, hoop, heep, hope."

Skip watched the rhythmic flashing of legs. His eyes glazed. The battered electric fan on the floor beside him droned sleepily, rustling the papers on his desk. Skip's head nodded and he eased into the delicious twilight of half sleep. A dream formed vaguely in his mind. He sighed and gave himself up to a good healthy snooze.

The metallic voice of the battalion commander rasped through the intercom and blasted him awake: "Shipp, come in here. Right away!"

Skip shook the last few wisps of sleep from his brain

and glared at the instrument. He pushed the button and said, "yessir." He had never been able to figure out why the Colonel used the intercom at all: his voice could be heard halfway to Dallas when he was upset. And Lieutenant Colonel Baker usually was upset.

The commanding officer's room was neatly furnished with a few little touches that befitted his rank and position. A large map of the installation covered one wall. A chrome settee and matching chairs flanked a glass-covered coffee table. A bookcase filled with imposing military titles graced one wall. Skip was one of the few who knew that the bookcase was a front to hide the fairly respectable bar which the Colonel used when VIPs visited. Baker's desk, as big as a pingpong table, was covered with plate glass and boasted a gleaming brass nameplate. Behind the desk sat the Colonel. Behind him a large American color drooped limply in its



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stand. On the wall, a large picture of the commanding general made up the worship center of Baker's shrine. A small window airconditioner purred cool comfort into the room. The battalion commander's office was designed to impress.

Skip was hot and sleepy, and his job as assistant adjutant had taken him many times into the inner sanctum. He was no longer impressed by the outward manifestations of power and position. "You wanted me, sir?"

The Old Man shrugged off a fleeting annoyance at Skip's lack of Gung Ho. He liked to be saluted, especially by second lieutenants. However, he could be as democratic as the next fellow, he always said, and decided to overlook the omission. Leaning back in his chair, he laced fingers behind an iron-gray crewcut. From his position he surveyed his underling. He rolled his after-lunch cigar from port to star-

had been sufficiently impressed, Baker continued. "I told him that I've got just the man who can do it." He pointed the soggy end of the cigar at Lieutenant Shipp. "That man," he declared in recruiting poster tones, "is you. I want you to start on it immediately. Right this very minute. If you need any help, let me know."

Having discharged the heavy responsibility placed upon him by The GENERAL, the battalion commander turned to more important matters. The young lieutenant thought about the project for a moment.

"May I ask a question, sir?" he ventured timidly.

The Colonel put down his comic book and sighed. "What is it?" The strain of command showed in his tired voice.

"Just what *is* a provisional truck company?"

A red line appeared on the Colonel's neck and inched up toward the ears. *He looks like a thermometer*, Skip thought.



board and bellowed, "Shipp, I got a little job for you."

Skip looked at him with suspicion. Something nasty was coming. He wondered how nasty. For the past three months he had endured a constant parade of these "little jobs." He had found few of them little, none of them interesting, most of them unnecessary, all of them difficult. This, he was sure, would be no exception. "Yes, sir," he said, with restrained enthusiasm.

The colonel was disappointed, but harrumphed and continued. "The GENERAL [somehow, Colonel Baker always managed to speak that word in capital letters] wants a provisional truck company organized here at Camp Maxwell. He's real hot on the idea. At staff meeting this morning he asked me if I had someone who could handle the job." The Old Man's eyes dropped modestly and he made a big deal out of tapping the ash from his cigar. Figuring Skip

He had seen this phenomenon on several occasions and knew that when the red line reached the Old Man's eyes, all hell would break loose. So he made a hurried, undignified and unmilitary exit before the moment of impact.

The United States Army has published millions of words on every subject from *Nails*, *driving of*, to what goes on in outer space. Skip found that provisional truck companies had not been slighted in the Government Printing Office. By the time he had checked all the references and lugged the manuals to his desk, half the books in the publications section were spread out before him. He spent the rest of the afternoon reading and making cryptic notations.

At coffee break time next morning, he pushed the mass of material away and rubbed the back of his neck. The adjutant strolled by with a cup in his hand.

"I hear you're the lucky one who gets to set up the new outfit. Allow me to be the first to congratulate you."

"Oh shut up!" Skip growled. "Unless you can give me some help," he added hopefully.

The captain took a tentative sip. "You got all the publications in front of you, Lieutenant. The United States Army has written about such things. All you do is track them down and use them."

"The organization is spelled out, Captain. I know how to set it up. But one thing the books don't say is, where do I get the manpower?"

"That's the easiest part of the job, son. All you got to do is ask the units. They'll spare you all the men you need."

"Are you kidding?" Skip was incredulous. "You know better than that. Those company commanders wouldn't give me a grass-cutting detail, much less personnel for a whole outfit."

The adjutant lifted a dainty finger. "Ah, but you're forgetting one small item. The Commanding General wants a truck company. And what the Gen wants, the Gen gets. The minute you let it be known he has told you to set this thing up, every unit on the post will bust a leg helping you get the men. I guarantee there will be no sweat."

Skip considered the logic. It was true the General threw a considerable amount of weight around camp in spite of his five feet four inches. "You may be right," he said slowly. "I sure hope so. It'll make my job a lot easier."

The adjutant gave him a friendly pat on the shoulder. "You won't have any trouble at all. Not a bit."

By the end of the first week, Lieutenant Shipp was forced to admit that the adjutant's estimate had been correct. The order forming the company was still damp from the mimeograph when Skip got a call from a unit commander on the other side of camp. "I have three very fine men for your new company, Lieutenant. You can pick up their records any time you want."

Some native caution made Skip ask, "What's wrong with them?"

Deep silence on the other end of the line. Then a hurt voice: "Lieutenant, I'm a little disappointed in you. Here I'm trying to help, and—"

"Sorry, Captain, I'll pick up the records tomorrow. And thanks. Thanks a lot."

So it went through the different units. It was ridiculously easy to get men. Company commanders literally urged people upon him. First sergeants broke into conversations suggesting other names. The initial flush of gratitude for this willing cooperation became a little dulled with suspicion. Skip grew more and more distrustful of the motives behind such generosity, but kept his own counsel until he had checked all the records.

When he exhausted the units of their volunteered help and found himself with enough bodies to start organizing the 999th Provisional Truck Company, he made a detailed study of each man's personal record. His worst fears were realized.

EARLY next morning he stood before Colonel Baker with the long list in his hand. "Sir," he said, "about this provisional truck company."

The Colonel looked up from his crossword puzzle. "Yes? What's the trouble? I'm busy, Lieutenant. Make it brief."

"Yes, sir. I have a list of names, Colonel. I'd like for you to look them over."



"Shipp, I got a little job for you."

"Oh. That's different." The Colonel took the list and began to read, nodding his head at familiar names, pursing his lip at others. "Good work, Shipp. Knew I could count on you."

"But sir . . . I can't recommend these men."

Baker looked up. "O-o-o-o-o? And why not, pray tell?"

"Well, I've checked their records."

"And?"

"They are the greatest collection of eight-balls in the entire camp. Misfits, trouble makers—the dregs, sir. The dregs! There's hardly one who hasn't been court-martialled at least twice. Most of those who missed a court should be discharged for low IQ or for being unfit." The wholehearted cooperation of sneaky unit commanders burned brightly in Lieutenant Shipp's memory. "Every one of these outfits is trying to push off its misfits. I think it's a lousy trick and I recommend you disapprove the whole list."

Skip paused for breath and looked for a nod of approval. It didn't come. Instead, the Colonel gave him a craggy smile. "First off, Shipp, I don't recall any orders giving you the right to make any recommendations. I told you to organize the outfit. That's all. Your responsibility did not extend to telling me my business." Baker waited until Skip's red ears indicated that the reproof had reached its target, then continued.

"It isn't at all unusual for company commanders to wish off their—ah—less desirable characters on a new provisional outfit. I expected it to happen. Always does. After all, no one will voluntarily give up his best men, now will he?" He leaned back in his chair and toyed with a pencil. "You should have known it was bound to happen, lad," he chided in a fatherly tone. "It's part of the old Army game. You've been around long enough to know that."

Skip shrugged. "Yes, sir. I suppose so. It just didn't occur

to me that anyone would saddle a company commander with nothing *but* foul balls." He brightened at the thought of having completed his mission. "Well, it's none of my business, anyhow. I sure pity the poor guy who takes the outfit. It'll be quite a shock, getting those guys out of the blue."

He chuckled, shaking his head in pity for the unsuspecting slob whose headache it would be.

The Old Man handed the list back. Never had he looked more wolfish as he said, "You're wrong on a couple of counts, Shipp. For one, it *is* your business. And since you hand-picked these men, you're not exactly getting them out of the blue. Shouldn't be much of a shock."

A long silence invaded the room. Lieutenant Shipp lost his military bearing. He slumped against the desk. He shook his head wildly. "You mean—no. You're kidding. You wouldn't do that to me. You couldn't—could you?" He ended, as the sage has it, not with a bang, but with a whimper.

"Not only could, I *do*, my boy, I *do*," the Colonel boomed in the heartiest voice of treachery since Benedict Arnold. "Starting tomorrow, you are the company commander. It should be quite a challenge for a young officer."

Baker crossed the room to the large wall map with Skip following blindly. After some careful searching, the Colonel found the spot he was looking for, out on the very edge of camp. "Here is where you'll set up shop. An infantry training outfit was there during the war. It's got everything you need: messhall, barracks, motor pool, administration buildings."

Skip gave a cry of pure anguish. "But Colonel. That section of camp has been closed since VJ-day. I was out there a few weeks ago. It looks like a ghost town. Weeds all over the place. Roofs leak, floors sag—it's a mess. Not even normal standby work was done. It's—it's impossible, that's what it is."

The Colonel fixed him with a steely eye. "Nothing," he said distinctly, "is impossible—to a *good* officer. Just look at it as a challenge."

Skip wished he would stop yapping about challenges. It brought to mind the days when men wore swords. That kind of a challenge appealed to him. He wondered if Baker had ever done any fencing.

"But sir," he said, reluctantly leaving the age of chivalry, "there's no equipment out there. Nothing. Just bare walls. How am I supposed to get it fixed up?"

"I do not care *how* Lieutenant. That is *your* problem. My problem is to see that you get it done."

Skip uttered a strangled bleat and stumbled from the room. He was bitter. The smirks and smiles of his fellow officers did nothing to relieve that bitterness.

Nor was his morale noticeably improved when the acting first sergeant of his new company reported. Skip was busy on the phone trying to locate some basic equipment when a wheezy voice rumbled, "Sergeant Murphy reportin' sir."

Skip looked up. The man before him was an old campaigner, bearing the scars of many a lost bout with what has been called John Barleycorn. Puffy eyes peered blearily over full, red-veined cheeks. The nose was a noble organ, laced with a network of blood vessels. All in all, Sergeant Murphy's face looked like a road map. A soiled khaki shirt strained as a king-sized paunch struggled for freedom. Both uniform and face looked as if they had been slept in for many nights.

"Welcome aboard," Skip said with heavy irony that was wasted. "We've got a lot to do between now and tomorrow morning." He handed Sergeant Murphy a sheaf of requisitions. "These have been approved. Get a truck and some men and pick the stuff up. I'll meet you at the company area in an hour."

Sergeant Murphy did not meet his commanding officer at the time specified. He didn't show up at all. After much searching, Skip found the man sacked out in his old company supply room, sleeping off what must have been a memorable jag. The new CO shrugged and went off to get his own truck and detail. By dint of much hard work, the barracks were ready for the arrival of the troops by next morning.

LIEUTENANT Shipp watched his company slouch into a rough formation. *My first command*, he thought, *and just look at them. These men are soldiers?* Pot bellies, soiled and wrinkled uniforms, unshaved cheeks, hungover eyes. He shuddered.

The acting first sergeant was comparatively sober, although he trembled like an aspen in a high wind. When Murphy called the men to attention, an alcoholic haze enveloped the CO. He decided that the First would be loaded long before nightfall if he continued to scalp the dog that had bitten him.

The company came into a brace with studied insolence. They eyed their new shavetail leader with open dislike. Murphy slurred his way through roll call and turned the group over to Lieutenant Shipp.

That very nervous young officer stepped forward. "Men, you are now members of this provisional truck company. It's a brand-new outfit, as you know. And there's a lot to do. But we'll get it done. [Very audible snickers. Skip determinedly ignored them.] We will get it done by working together. Teamwork is always important in the Army, but especially in a new outfit like this, which is a—ah—brand-new outfit. [More snickers.] Now, a lot of things here won't be as good as you had them in your last outfit." Skip waved a hand at the decrepit buildings and the weed-choked streets. "It isn't exactly the Ritz-Carlton," he said with a smile to show them their CO had a sense of humor. This time there were no snickers. "I know that we can get the place in top shape if—er—we work together in teamwork. I'll be working with you and for you. Please remember that. I'd like for this outfit to be the sharpest company on the post." A blare of sardonic laughter cancelled the rest of Skip's prepared speech. He finished quickly by saying, "Sergeant Murphy will tell you what there is to be done. That's all I have for now."

He wheeled and scurried back to the orderly room, shaken and sick at his stomach. From the ranks behind him came muttered curses, subdued whistles and laughter. The laughter grated on Skip's nerves. He wished he had the guts to go back and straighten them out. He knew he should do just that. These men needed a heavy hand; and if they didn't get it at the beginning, his life would be miserable. But the orderly room pulled him like a magnet. There, at least, he would be away from those contempt-filled eyes.

At his desk he fought back unmanly tears. He had really botched up his first day in his first outfit. He could hear Colonel Baker sneer as he relieved Shipp from his command. Skip wished he was dead.

The feeling persisted until the morning distribution brought a desk full of papers; then it was intensified. Skip had spent many weary hours filling out requisitions and work orders, carefully giving the authority when there was one, justifying the request when there weren't any written guides. He looked over the sheaf of returned slips and cursed roundly at each disapproval. That afternoon he called everyone he knew in the various staff sections and warehouses, and by nightfall had scrounged a pitiable amount of equipment. *At least*, he thought as he left the BOQ, *we have enough to start with in the morning.*

That night, two men went over the hill. The next morning, the first sergeant showed up for reveille drunk. One of the cooks, in a fit of temper over some fancied insult from the serving line, splattered pancake batter over the kitchen walls. Fights broke out like brush fires. The equipment Skip had so painfully gotten together was broken or lost.

He spent the better part of the week trying to instill a little esprit in the company. He talked with the men, patiently explaining, correcting, exhorting, using all he could remember from his applied psychology courses and those leadership manuals that made it all look easy. It was like talking through a glass wall to deaf mutes.

The men of the 999th Provisional Truck Company were vocal enough, however, when it came to expressing dissatisfaction. They complained incessantly. Some of their gripes were justified, Skip admitted. Once the company had been formed, the project lost its position near the General's heart. The unit commanders, once so cooperative, now turned a deaf ear to the man who had inherited their misfits. The company lost any chance it might have had to get the material it needed to operate. Requisitions bounced with monotonous regularity. Just as monotonously, Skip re-submitted them. If it were all part of the Old Army Game, Skip wished someone would change the rules or call the game.

ONE morning Sergeant Murphy came into Skip's office. "Lieutenant, I can't figure this one. You *sure* you want this sent?"

Skip took the paper and read. "Justification: I have been trying to get you idiots in Quartermaster to supply this company with needed equipment for the past week. What more justification can you need than this: I have a company of men. Men must be fed. Food must be prepared in various utensils used in the kitchen. It shouldn't take a master mind to understand such a simple matter. I do not accept your 'due out' nonsense. I've seen enough junk in your warehouses to run a dozen outfits the size of mine. What are you doing—saving it for War Surplus sales?"

There was more, all in the same vein. Skip carefully tore the paper and threw the scraps into his wastebasket. "Thanks for not letting it get away, Murphy," he said, feeling silly. "I get so burned up with all the static from these tech services that I just blow my top on paper. Then when I've said all the sarcastic things I can think of, I tear the mad notes up and write a calm request. This one slipped by."

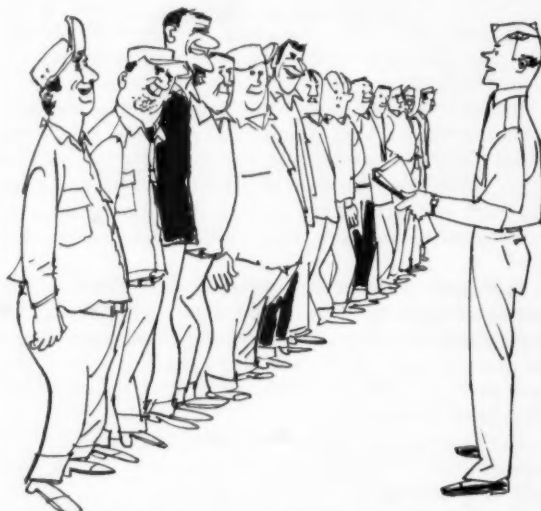
Murphy nodded in ponderous understanding. "It's a good thing I found it, sir. Could cause you trouble. But I know what you mean about gettin it outa your system. A man's gotta have some escape from the mess or he'll go nuts. Everybody needs a safety valve." A thick tongue flicked briefly over his lips. Skip had no doubts as to the type of

safety valve his first sergeant had in mind.

This touching scene of mutual confidences was interrupted by the tramp of heavy footsteps in the outer office and a frightened "Tenhut!" by the company clerk. Skip barely had time to exchange a questioning glance with Murphy when the door was flung wide and Colonel Baker stormed in.

"Well, Shipp," he boomed, "thought I'd come by and see how things are shaping up. Might as well tell you I don't care for the appearance of the place." He looked around the bare office and out the dusty window toward the barracks. "Like a garbage dump. If you'd spend more time in the area and less time crying the blues in my office, you'd have accomplished more in the past two weeks." He tapped his swagger stick on the desk top. "Let's move out through the company. I want to see if you've done *anything* in your command."

When the surprise inspection was finished, Skip had been



"I'd like for this company to be the sharpest company on the post."

informed often, clearly, and loudly, that—in the opinion of the battalion commander—he (Skip) had accomplished not one unprintable thing. Furthermore, he (the battalion commander) was giving Shipp one month to get the place shaped up, or there would be hell to pay and one each, head (Shipp's), would roll from Maxwell's main gate to some desolate outpost in the far reaches of the Arctic.

SKIP was numb with outrage and anger when the Colonel left. He called the men together and pointed out the deficiencies Baker had noted, but in a far less heated manner. As usual, he had the weird suspicion that not a man in the outfit spoke English. He fumbled to the end of his dreary little speech and turned toward the orderly room where he fully intended to write the first draft of his resignation from the United States Army.

A loud, prolonged raspberry sounded from the straggly ranks. Someone gave a high, braying laugh. All the pent-up anger and frustration of the past month congealed into a solid mass as the white-lipped lieutenant wheeled and stalked back to the guffawing troops. He was icy-calm with rage. He would gladly have challenged the entire group to

mortal combat—and it showed. Such a novel experience for the men of the 999th Provisional Truck Company made them snap into quite a creditable brace.

Skip jammed his hands on his hips and looked them over one by one. He swallowed convulsively. "All right, you monkeys," he began in a voice that trembled only slightly in anger, "you asked for it. I had hoped that we could run this outfit without mentioning your past records. I was wrong. I also thought you could be treated like human beings. I was wrong. You're a bunch of animals who don't appreciate a break when you get one—and you've *had* yours."

He became aware that the troops were paying attention. For the first time since the company was formed, every man hung on every word he uttered. It was flattering. "From now on we get chicken. We'll start by talking about your records. There is not a mother's son of you who isn't material for a BCD or a 208 board. This is a hand-picked outfit. I know, because I picked you myself. You men were given to me by your outfits because they wanted to get rid of you. You are the scum of every other unit at Camp Maxwell." His voice squeaked a little as he told them distinctly, "You are the guys nobody else wants. The goof-ups, the foul balls, the troublemakers. I don't intend to let you forget that. *No* one wants you. I don't want you, either, but I got stuck with you."

Some of the men shuffled uncomfortably. Skip flicked them with a glare of pure hatred. The shuffling ceased.

"This company will amount to something if I have to whip each of you personally, every day. At this minute, I'd be happy to start on any volunteer who thinks I can't do it or I don't mean what I say." He paused, hoping for a taker. No one, it seemed, cared for the idea.

"Now get one thing through your thick heads. I am a career soldier. I plan to be in a long time and I will not have my record loused up by you hoodlums. And don't get any wild ideas that I will send you to the stockade. I know that most of you have spent many happy hours there raking grass and picking up butts. But you're not going back. If any man from this outfit goes to the pokey, it will be after he has been patched up at the hospital. From now on you will do as you are told, when you are told, and you'll do it on the double!"

He shifted his attention to the first sergeant. "Particularly, it goes for you, Murphy," he said in a tone that took ten degrees off the thermometer. "You're supposed to be the First Soldier. It's time you began to act like one. I am holding you completely and personally responsible for the conduct of these hyenas. The next time I get chewed out like I did a while ago for stuff you assured me was taken care of, you will be wearing the baldest sleeves in camp. I don't care if you do have twenty-two years of service. Louse me up one more time and you'll go out of here as naked of stripes as the day you enlisted. Do I make myself clear, you drunken bum?"

Murphy sucked in his paunch. "Yessir," he managed through stiff lips.

"Good." Skip turned back to the formation. "The company is restricted to the area until further notice. You will work until you shape up. You will work until I say quit, and that is a word I can't pronounce. You will work until you drop in your tracks. Then you will get up and work some more. Any questions?"

There were none. A respectful silence followed Lieuten-

ant Shipp back to the orderly room. There he found the customary batch of disapproved requisitions and a rejected work order from the post engineer. This last stung. It was essential that the buildings be repaired. They weren't safe for human occupancy. And that idiot engineer—Skip wrote a lengthy note of scathing denunciation and suddenly felt better.

After a few minutes of thoughtful study, he decided to explore an idea that had nagged him for some time. First he spent an hour screening his men's records, making notes and compiling a list. Then he sat back and thought of the various ways to use the information.

Sergeant Murphy lumbered in with a worried frown on his brow. The recent tongue-lashing was forgotten under the strain of more pressing problems. "Lieutenant, we got us some trouble."

"That's hardly news any more," Skip reminded him wearily. "What is it this time?"

"Well, sir, that kitchen range has had it. The whole insides fell out a few minutes ago, just after chow. We got to have a new stove, Lieutenant, and pronto. The cooks can get supper on the field ranges, but them things won't take much use. They're beat up, too."

Skip smiled a beatific smile. "Sit down, Murphy," he cried jovially. "I want to tell you a story."

Murphy sat gingerly on the edge of the chair. His expression made it clear he was ready to cut and run for the men in white jackets if the boss got violent.

"Once upon a time," Skip began, watching the smoke curl up from a cigarette, "there was an orphan child who lived on the ranch of his very wealthy uncle. This orphan—we'll call him Clyde—was unwanted by his relatives. Bluntly speaking, they hated his guts."

"Well, one day the uncle said to him, 'Clyde, I want you to go farm the back forty. It's your big chance.'

"'But uncle,' Clyde said, 'I have no tools to farm with. What'll I do?'"

"'That is your problem, Clyde,' the uncle said. 'You always said you wanted to be a farmer. Go farm.' And poor Clyde went out into the darkness alone."

The two men were silent, thinking of poor Clyde's misfortune.

"Well, sir," Skip continued, "one day he was over by a barn that was all padlocked. He peeked in and saw the very farm machinery that he needed back on his forty acres. His uncle had said there was no such stuff available, and Clyde now realized that his uncle was a dirty liar. So that night Clyde went back to the barn and took what he needed. And he became a very famous farmer and lived happily ever after."

Skip leaned back, pleased with his story-telling ability.

Sergeant Murphy might be slow on some things, but larceny was not one of them. A happy smile creased his face. "You got any ideas about where a barn might be at, Lieutenant?"

"There used to be an engineer outfit over in the eighty-four-hundred block," Skip told the ash on his cigarette. "I was duty officer one night a few months back and noticed a fully equipped messhall over near the woods. It's locked up tighter than the skin on a snake." Skip reached for the list he had drawn up earlier. "Some of our men have had experience in locksmithing of various sorts. If somebody like—oh, say Hawes—were to practice a little, why he might just be able to open the lock on that door. It's the

same type as the ones we have."

Murphy nodded. "I gotcha, Lieutenant. I'll get a few guys and go over there tonight."

Skip held up a warning hand. "Sergeant Murphy!" he cried. "I am shocked at you. The very idea, going in the dead of night like a—a thief! We are not *stealing* anything, now, are we? Of course not. Particularly if we take *them* a stove from *our* messhall. Fair exchange is no robbery, as the feller says. And I think it should be done in the light of day. Like this afternoon where all can see. It's surprising how many people move stuff around on this camp."

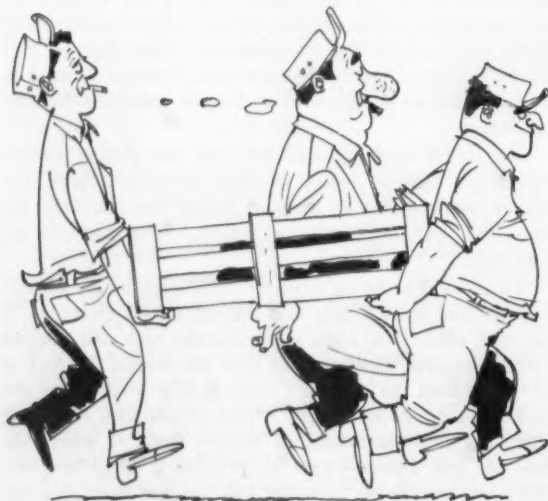
Murphy chuckled and added the final touch. "One of the trucks them creeps at headquarters give us came from the engineers. We ain't had time to paint out the bumper markins yet. That would be a good one to use."

"It would indeed. I leave the project in your capable hands, along with the names of the men who have shown skill along these lines."

As Murphy was leaving the office, Skip added thoughtfully, "While you're over in that area, Sergeant, you might look in at their motor pool. I think there's a hoist all locked up. If memory serves me, we are short one each, hoist."

WHEN the range began to put out and the cooks came up with some truly inspired cuisine, Lieutenant Melvin (Skip) Shipp tasted the heady wine of triumph. But wine of any sort can lead to overindulgence: and it soon became evident that the men of the 999th Provisional Truck Company were loaded. Cans of paint appeared in the barracks. Long-needed tools were discovered in unlikely places. Truck parts were left in the courier Jeep. Daily, small groups of men disappeared right after reveille to return by midafternoon in covered trucks. Telephone lines between Lieutenant Shipp's office and other units at Camp Maxwell stayed warm to the touch. He was accused of many things which he denied with all the heat of outraged innocence, ignoring such epithets as "Ali Baba and the forty thieves." After one particularly harrowing encounter with a Quartermaster major who threatened a trial by his peers, Skip smiled bravely at his first sergeant. "My strength is as the strength of ten because my heart is pure . . . When Hawes gets back, tell him that the interior guard no longer makes his round

Fair exchange . . . in the light of day.



of the seventy-seven-hundred block. He'll know what I mean."

The men also discovered what Skip meant by work. He moved his gear from the BOQ and took up residence in a room in one of the barracks. He spent his waking hours in fatigues, driving and lashing himself and his men unmercifully. The 999th's personnel worked like demons from—as one disenchanted man put it—"can-see to can't-see." When they were finally released at night, the men were too tired for mischief.

With such a schedule, one would expect that complaints would remain at high tide. But no one griped: at least, not to the CO, and Skip tactfully ignored the split lips that blossomed at the same time as Murphy's skinned knuckles. He was blessed with astigmatism in this area, even at inspections. Such blindness was unusual, for the Saturday morning happy hour was the cue for Skip to be at his all-time worst. He carried the memory of every previous inspection in his blond head and could quote his instructions of last week with vicious perfection. No man who felt the lash of his anger once could forget it—and nobody in the company escaped it.

One rainy morning he fell them out in formation after he had completed his appointed rounds.

"I have seen better pigsties than the barracks I've just been in," he told them in the caustic, half-sneering manner that had become second nature to him. "You people just don't seem to learn that when I say clean it, I mean *clean* it. Sergeant Murphy will point out the corrections I want made. They will be made before noon today and they will stay made."

He paused. The only sound was the rain dripping from ponchos. "This company has been restricted for three weeks. In that time we have not had anybody drunk or AWOL. For you characters, that is probably a record of some sort. You've managed to put in a decent day's work on occasion, and that *is* a record. The place is beginning to shape up. Not much, but a little. We have one week to prepare for Colonel Baker's inspection. That will be a honey, so we better stop and get our breath. I may regret this, but the restriction is lifted as of thirteen hundred today."

So disciplined had the men become that no one spoke. But they breathed significantly and Skip absorbed the joyous intake of breath with aplomb. "I'll probably lose half of the company by my generosity," he predicted mildly, "but I'm tired of baby-sitting. So enjoy your weekend. Remember one thing: If you louse up, you'll get the treatment. I want to see all of you at reveille on Monday—sober, shaved, and ready to roll. We've only got one week to put the finishing touches on this leper colony before the *Führer* visits us."

IT was mid-afternoon when Skip finished his paperwork and decided to treat himself to a night away from the boys. He took a long shower and put on civilian clothes for the first time in what seemed like years. He surveyed himself in the mirror. The tan looked good against his blond crew-cut. Hands were nicely calloused. They looked capable, even with the little tracings of grease that still lurked in the knuckles. Lines around the eyes made him look older, more experienced and competent. The eyes themselves were disillusioned and hard. They were also tired.

The bar of the Officers' Club was deserted when Skip hoisted his lanky frame onto the stool. He was glad for the solitude. He wanted no companionship. He looked around

the dimly lighted room. It had been so long since he had entered the place that he felt ill at ease. He relaxed in the cool dimness. The white-jacketed bartender moved quietly to him and stood waiting.

"Don't I know you from somewhere?" Skip asked abruptly.

"Yessir. Johnson from the company. Got a chance to make a coupla bucks here when you dropped the restriction."

"Johnson. Oh yeah. One special, a summary, assorted company punish—" Johnson's face had stiffened in hurt surprise. "I'm sorry, Johnson," Skip pounded the heel of his hand against his forehead. "I'm *really* sorry. I shouldn't have thought it, much less said it. Right now I'm so bushed I don't function good. Do you suppose we could forget what I said—please?"

Johnson's grin came edging back, skittered around a bit, and finally settled into place. "Consider it forgot, boss," he said in the grand manner. "I got just the tonic to rebush that bushed feeling of yours."

There was a happy glow around Skip's personal world when Johnson set the third tonic before him. Skip raised the glass and listened to the ice cubes talking to each other. "I often wonder what the Vintners buy one half so precious as the stuff they sell," he quoted, paying careful attention to the essences.

"What'd you say, Lieutenant?"

"I didn't say it, Johnse, ole hoss," Skip nibbled at the edge of his glass. "Feller name of Omar Khayyam said it."

"I don't know any Homer. He in the company?"

"Nope, but I sometimes wish he was. Omar had a mighty fine philosophy. Like the time he said, 'While you live, Drink!—for once dead, you never shall return.'"

Johnson chuckled. "Him and Murphy would get along great."

Skip nodded in solemn agreement and was about to contribute more culture to the discussion when they were interrupted. Four officers stomped in with great noise, cursing the rain that had spoiled their golf game. Skip watched them through a shimmering glass wall. There must be something wrong with his eyes. Things wiggled. And wavered. He brought the party into focus and recognized them. Suddenly the golden peace of the moment was gone. He felt the disgust that only a tired troop officer can show toward the pink-and-polished fatcats on staff. He snorted audibly into his glass.

The sound carried to the foursome. One of them spied the lonely figure. "Hey, guys, look who's here," he yelled. "Old Skipper Shipp. Engineer of the Eight-Ball Express."

In the shout of laughter which followed, Skip drained his glass and carefully put it on the bar. He slid off the stool and steadied himself. A small hiccup escaped him. "Parm me," he murmured to Johnson. Then, unsmiling, he walked toward the little group. He laid an ungentle hand on the shoulder of the funny man. His voice might have come off a glacier as he said, "Look Loudmouth, let's go easy on that eight-ball business, shall we? I don't like it."

Loudmouth bristled. "Get a load of him," he appealed to the others. "He doesn't like it. Now ain't that a cryin' shame?"

Skip tightened his hold and twisted. "If you'd care to discuss the matter outside, Lieutenant, I'd be happy to oblige."

His captive tried to squirm away. "Watch it, Shipp," he

warned. "You're crushing the cashmere. Get your cotton-pickin' hooks off me before I come up 'long side your head. You're getting as bad as those apes in your company, boozed up at this time of day."

Skip lifted him off the stool with one brawny hand and closed the other menacingly. "One more crack about my outfit and I'll mangle you," he promised. "I'm a little fed up with you toy soldiers at the flagpole echelon. I'm tired of your funny jokes. I'm sick and tired of you knotheads kicking my requisitions around so you can think up some more funnies. I don't take kindly to any cracks about my men. They do more in a day than your section does in a week. So just leave them out of the conversation."

One of the other officers intervened. "All right, you two, knock it off. Shipp, I think you better leave before you get thrown out. It wouldn't look good for you or your company for you to get into trouble because of a common brawl, now, would it?"

Skip blinked at him owlishly and considered the logic of the argument. "Guess you're right," he conceded. "Pleash 'cept my agopoly." He turned to leave the bar and noticed that Johnson was holding a bottle by the neck, at the ready. Skip was grateful for the gesture of loyalty. He winked. The bartender relaxed and put the bottle on the shelf. Then he returned the wink.

SKIP spent the weekend wandering about, feeling lost and lonesome. He was ashamed of his behavior at the Club. He knew the affair had been told and retold with numberless additions and embellishments and he didn't feel up to returning to the scene of the crime. The company area was deserted. He looked forward to Monday morning.

When it came, he went out to face his men with a mixture of dread and hope. Not a man was missing. He was pleased and more than a little relieved. He allowed himself one small grin and was rewarded by a generous ration of broad smiles in return.

After breakfast he was enjoying a cigarette with his second cup of coffee when a group of men struggled into the mess-hall carrying a large canvas-covered object. Skipper watched with detached interest as they placed it in front of his table.

Chisholm from the motor pool was the spokesman. "Sir," he said, "us guys—well, we figured that we oughta have a sign for the company." He waved his fatigue cap in a vague circle. "You know, Lootenint, so's people could find us. Know what kind of an outfit it is."

Skip nodded. "I know about signs, Chisholm," he said gravely.

"Well, sir, we made us one. And we want to put it over the gate."

The canvas was stripped from the sign. Screaming black-on-white, foot-high letters proclaimed that this was the HOME OF THE 8-BALL EXPRESS. Occupying the center of the sign was a caricature of Lieutenant Shipp jackknifed over a pool table, drawing a bead on the huge 8-ball with a very crooked cue.

"Who dreamed-that up?"

The cold, unfriendly tone was back. Smiles faded from puzzled faces. Johnson broke the awkward silence by volunteering. "I guess it was me, Lieutenant. I sort of told the guys about the little hassle at the Club Saddy night, and—well," he shrugged apologetically, "it seemed like a good idea."

"Seems to me like you talk too much," the officer clipped,

"But now that you mention Saturday, I seem to remember that the hassle started *because* somebody called us the Eight-ball Express."

"Sure, boss, we knows that," said the maintenance chief, a tall, brown-skinned youngster. "But see, it's diffrent if we calls us that or if *they* calls us that."

"He's right, sir," put in Murphy. "We been needin a name, anyways. 'Nine-ninedy-ninth Provisional Truck Company.' What kinda name is that?"

"They gonna call us the Eight-ball Express from now on, anyhow. Let's beat 'em to it."

"Besides, we worked on it all day yesterday."

Skip considered the sign. The cartoon was really good. Matter of fact, it was terrific. The artist had captured the frowning seriousness which was Skip's hallmark in the company. He pictured Baker's expression when he wheeled in from headquarters on inspection day. He began to chuckle. It got out of hand. His near hysteria infected the committee and joy reigned unconfined in the messhall.

The sign was installed with due formality just before the men went back to work after noon chow. Almost as soon as it was in place, some strange chemistry began to work in the company. Skip heard whistling and an occasional burst of laughter from men on details. Some budding poet had discovered an old pop tune and began working on a song which had as its main theme, "I'm an Eight-ball, aren't we all?"

Skip was vastly pleased at these indications of better morale. According to the leadership manuals, they indicated that the outfit was functioning as a team, and this practically guarantees success. Skip had to remind himself that the Eight-ball Express was not a normal company, and anything could happen.

It did: but from an entirely unexpected source.

Sergeant Murphy entered Skip's office with a pallbearer's expression. "Lieutenant," he said somberly, "I think the balloon has went up."

Icy fingers ran up and down Skip's backbone. "Who has done what?"

"Oh, it's nothin that anybody in the company done," Murphy assured him. "At least, not recent." He pointed a banana-sized finger at the telephone. "Phone call for you, sir," he said significantly. "From the Post Engineers."

Skip rolled his eyes heavenward. "Oh, Lord," he groaned. "Send me a good defense counsel, please."

In response to the call, Lieutenant Melvin (Skipper) Shipp, Commanding Officer of the 999th Provisional Trucking Company, made a hurried trip to the office of the Post Engineer. When he was ushered into The Presence, Skip came to a heel-clicking brace and threw one of his snappier salutes.

"Lieutenant Shipp reporting as ordered, sir," he said crisply.

There was nothing crisp about the officer behind the desk. Slouched down in his chair, bent in concentration over some odd bits of metal in front of him, the man with the tarnished eagle on his collar didn't even look up. Skip studied the top of the balding head. Maybe the old goat was deaf.

"Lieutenant Shipp reporting—" he began, increasing the volume with each syllable.

"I'm not deaf," the colonel informed him testily. "And for God's sake, stop making like a Prussian drill sergeant."



Surveying himself in the mirror, Skip seemed more experienced, more competent.

He worked on the bits of metal for a moment longer, muttering darkly, "Damn heel-clicking, highball-throwing lousy shavetails in the Army nowadays."

It occurred to Skip that maybe this would not turn out to be one of his better days. He relaxed a little to save his strength for whatever lay ahead.

The colonel finally sat back in his chair and brushed halfheartedly at the lap of his wrinkled suntans. He looked up at Skip, his busy eyebrows giving him the appearance of a dissipated wire-haired terrier. "I wish to God they'd outlaw Christmas," he said with great feeling.

Skip blinked. Maybe the heat of midsummer had been too much for the old man.

"Lookit at what my wife gave me last Christmas," the colonel pointed at the stray bits of metal. "One of those fancy pipes. Couldn't get me a nice, simple briar. Oh, no. Had to be one of these miserable things. Got to be a licensed plumber to operate it. It began gurgling like a Turkish *hookah* and I took it apart to clean it. Now I can't get the bloody thing back together." He glared at the scattered pieces. "And me an MIT graduate! Know anything about pipes, Lieutenant?" he asked hopefully.

"Nossir," Skip replied with real regret. "I'm a cigarette man myself."

"It figures," the colonel grunted. "You look like the type." He swept the disassembled instrument off the edge of the blotter and settled back.

"So. You are Lieutenant Shipp," he said, raking the young man with a glance that had teeth in it. "The poor man's Jesse James."

Skip flushed. Visions of cell blocks danced in his head. He accepted the colonel's character analysis wordlessly.

The old man looked back at the pieces of pipe, sighed, and began to work on them again. "This outfit you command—it's known in some circles as the Eight-Ball Express, and in others as the Lavender Hill Mob. Right?"

Skip was positive this was not his day. "Yessir, Colonel. Its official title, of course, is the 999th Provisional Truck Company. Marked down from one thousand, sir," he added in an attempt to inject some levity into what promised to be a sordid discussion.

The colonel made the sound of a man gagging on a fish bone. Then he said, "I—as you may have discovered from reading the desk sign—am Colonel Carlson. I am the Post Engineer."

Skip took a deep breath and tightened his brace. Here comes the court-martial. "Yes, sir, I know."

"Good. Part of my job is to read all the incoming distribution that is addressed to the Post Engineer. It is not too rewarding a task, most of the time, but it's necessary. Well, what do you know? This thing looks like it's back together," he said in a pleasantly surprised tone. Carlson rummaged in his desk drawer for a sweat-stained tobacco pouch. "This morning, however," he continued, "I received a disposition form which broke the monotony. It was a little unusual. Mystifying, actually. Thought perhaps since it came from you, you could explain it."

Relief at being spared—even temporarily—the hangman's noose was tempered with wild confusion. Skip thought furiously. "There must be a mistake, sir. I don't remember any DF to you."

The colonel tamped his pipe and blew the tobacco shreds off the desk. "No mistake, Shipp. You may remember this DF when you see it." He reached for the basket marked "Hold" and extracted a green paper. "Read it, Shipp. Start from the beginning."

Skip took the paper and checked the signature block. It was his, all right. No doubt about it. More mystified than ever, he began to read aloud. "Subject: Failure of the Post Engineer personnel to get off their fannies and on their feet." A slight flush warmed his neck. "To: The Post Engineer, Camp Maxwell, Texas."

"You're doing fine, Lieutenant," Colonel Carlson encouraged him. "Just fine. Keep on."

"Comment one, paragraph one. For a number of weeks the undersigned has submitted work orders to your lousy section for the repair of buildings in Area 16, presently occupied by the 999th Provisional Truck Company. As of this date, nothing has been done. The result is that this area still looks like Tobacco Road."

"Paragraph two. Since you people are obviously not interested in doing what you get paid to do, it is requested that the undersigned be allowed to detail men from the company to do their own repair jobs. As another famous warrior once remarked, 'Give us the tools and we'll finish the job.'"

"Paragraph three. If the necessary equipment is issued to this company, the Post Engineer will be freed of the responsibility for the abovementioned repairs, and personnel of that section may return to the occupation they seem to know best: namely, doing nothing. Work orders presently on file may be disposed of as the Post Engineer sees fit. It is recommended that they be rolled up, tied with barbed wire, and—" Skip's voice faltered to a stop. His flush extended to his crewcut. Even his scalp felt warm. He remembered the DF.

The colonel spoke from behind a cloud of gray smoke. "Please don't stop now, Lieutenant. You're getting to the good part. Begin with the word *shove* and read it nice and clear. It's very graphic material."

Skip read the descriptive paragraph to the very bitter end: hesitantly, perhaps, but nice and clear. "Sir, I can explain this."

"I hope so, Shipp," Carlson said mildly. "I do hope so. And I hope that your explanation is half as interesting as your—ah—literature."

Skip dropped the offensive document and wiped his palms on the seams of his trouser legs. "Colonel, ever since I took over the company, it has been a constant battle to get things done. Necessary equipment—stuff that any company has a right to expect—we don't get. I send in requisitions, they bounce. I submit work orders, they're ignored. I'm tired of being treated like an illegitimate child at the family reunion."

"I am the Post Engineer, Shipp, not the Post Chaplain. And I'm not overly interested in your family background at the moment. Spare me the details and the personal problems and get to the part where you explain this DF."

"Yessir. I'm coming to that . . . Well, I kept getting no action on all these requests, like I said, and I got sore. So I started writing nasty replies to all of the rejections and disapprovals. I sort of blow my top on paper. Then when I get it all out of my system, I tear up the mad notes and can be more objective about re-submitting the requests." Skip looked at the colonel to see if he were getting through. "The system has worked pretty well."

Carlson let a large smoke ring drift past his ears. "Until today," he corrected.

"Yes, sir. Until today. Unfortunately, this one slipped by, somehow or other."

"Don't you read what you sign, Lieutenant? Saves many embarrassing moments."

"Usually, I do, sir, yes, sir. But this—"

"This one slipped by."

Skip was tired of saying "yes, sir," so he nodded.

There was a long, painful silence. Carlson reached for the DF and re-read it. The corner of his mouth twitched and was quickly controlled. "I like your style, Shipp. Very much to the point." Skip's sudden upsurge of hope was demolished when the colonel added, "However, I wonder how The GENERAL'S ulcer is doing today. His sense of humor fluctuates with the condition of his stomach—like the moon and the tides. If it happens to be low tide today, he might not think this is funny. He might not even think your explanation is any good."

If it is possible for a man to grovel while standing at attention, Lieutenant Melvin Shipp accomplished it. "Colonel, I'm sorry this ever happened. I was wrong in writing it and doubly wrong in letting it get out of my office. I wish there were some way I could undo the whole mess." He shrugged ruefully. "What else can I say? Go ahead and throw the book at me. I've got it coming."

"Well, now, son, I wouldn't start packing my bags for Leavenworth just yet. Tell me something. When you wrote this little mash note, did you mean what you said?"

Skip battled a cowardly impulse to lie. "Yes, sir. I meant every word."

"And now?"

A grimace that might have passed for a smile crossed the condemned man's face. "I might as well go for broke. Yes, Colonel, I still mean every miserable sentence."

Surprisingly, the colonel smiled. "Good. Anything I hate is a junior officer with no guts." He laid the pipe on the desk and turned his terrier eyes on the perspiring lieutenant. "You realize, of course, that I can't let you get off scot-free."

Bad for morale. I'd be setting a poor example." He pursed his lips and narrowed his eyes in concentration. "However, I *might* be induced to forget that you wrote the DF."

"How much?" Skip asked in a strangled croak. "I mean—what's the pitch?"

"Pitch? What pitch? You said a minute ago that you wish there was a way to undo this mess. I'm just trying to think of a way to help." He snapped his fingers. "Ah! I have it. There's a soldier in our section that I think would be a fine addition to your unit. It would be easy for me to arrange a transfer, and then we could forget the DF." He beamed at Skip.

"I wonder," Skip wondered aloud, "if Boy's Town could use another counselor." He was beaten and he knew it. "Okay, Colonel," he said wearily. "I'm in no position to argue. What has this guy done—murder? Arson, maybe? Treason?"

The colonel was shocked. "Why, Lieutenant," he protested, "whatever do you mean? I wouldn't wish off any bad actors on you. It wouldn't be fair. I'm not like *some* commanders on this post," he added virtuously. "No, Shipp, the soldier I have in mind for your unit has not committed murder or any other criminal offense. A little company punishment, perhaps, but nothing really serious."



Skip roared and the bartender held the reinforcements.

Skip tried to pierce the bland, hypocritical smile. *There is something wrong here. Something stinks to high heaven.* He shook his head decidedly. "Nope, I won't do it. I've got enough trouble with the apes in my company already without adopting one of your rejects."

The colonel waved the green paper. "Well, you leave me no choice, Shipp," he sighed. "Sure hate to do this to you, boy. It'll probably be the end of your military career." He reached for the phone. "How will you explain the disgrace to your mother?"

"But—but this is *blackmail*!"

The colonel nodded cheerfully. "Yes, isn't it? Blackmail, or a charge sheet with the words *insubordination, disrespect, conduct unbecoming, etcetera* etcetera. Hard to choose between the two, I imagine."

The blackmailee sampled the alternatives and found neither of them tasty. "You win. Send your boy over. My guys will probably mangle him before taps, but I suppose it'll all work out. The least you could do would be to tell me what's wrong with this man."

The colonel cradled the phone. "Who said it was a *man*?"

Skip looked at him blankly. He was in no mood for riddles. "What else could it be, for heaven's sake—a Shetland pony?"

"You're not thinking clearly, Lieutenant," the colonel commented sweetly. "Haven't you heard of the Women's Army Corps?"

When the full impact of this treachery had soaked in, Skip whispered, "You don't mean—you wouldn't wish off a Wac on me. You wouldn't dare! It's forbidden by the Geneva Convention. I admit my DF is in poor taste, but good Lord, Colonel, it isn't a plan to blow up the White House. Be reasonable."

"Oh come, now, Shipp. Let's *you* be reasonable. This is the modern army. We need female soldiers. They do excellent work and free many men for duty at the front."

Skip tottered across the room and fell into a chair. His voice was that of a broken man. "I am not questioning the need for nor the use of Wacs in this modern army. They are wonderful girls. All of 'em. Splendid contribution to the defense effort and all that. But, dammit, Colonel, not in *my* outfit."

Carlson fondled his pipe and watched the young man's agony of soul with an untroubled, detached smile. "No need to shout. All I'm suggesting, Shipp, is that you take this Wac into your unit. That's all. It is not a fate worse than death. I'm sure that Private Elsie Mayne will be a noble addition to your company. She has worked in Buildings and Grounds section for several months. You can find a job for her."

"But I've got a whole company of *men*, Colonel. What's it going to be like, having one Wac in an outfit of men?"

"What do you think I have in Buildings and Grounds, Shipp?" the colonel retorted with asperity. "Shetland ponies?" He leaned forward, helpfulness oozing from every pore. "You're making a big thing out of this. And all for nothing. She can stay at the WAC barracks and report for duty every morning and go home every night. You don't have any problem."

Skip rubbed the toe of a smudged shoe on the back of his trouser leg. "All right, all right. You make it sound so easy." He stood up and approached the desk. "Can I have my DF back now, sir?" he asked plaintively.

Carlson gave a let's-be-reasonable shake of the head. "When Private Mayne is picked up on your morning report, then and only then will you get it back."

Skip gave a half-hearted wave at his temple that was meant for a salute and turned to leave. As he reached for the door, Carlson called: "Oh, by the way. My crews will be in Area Sixteen this afternoon. I've heard rumors that there are a few little jobs around there that need to be taken care of."

The young officer's lips moved soundlessly. A careful observer might have been led to believe that he was casting aspersions upon the Post Engineer's ancestry. Then he walked to his Jeep: a man whose faith in human nature had just been shattered.

THE day after the fateful meeting with Colonel Carlson, Skip was helping Chisholm remove the radiator of a decrepit deuce-and-a-half when the company clerk dashed bareheaded into the shop.

"Sir," he panted, "Sergeant Murphy wants you to please come to the orderly room. It's a mergency."

Skip laid down the wrench and surveyed the young messenger with disapproval. "Roll your sleeves down,

Ramsey, and button your pocket. What's the idea of roaming around the company area like an escaped rock-and-roll addict? You're in the Army, soldier. Make like a troop. Where's your cap?"

Specialist Ramsey's hands flew busily and automatically at their appointed rounds. His eyes never left his CO's face. "In the orderly room, Lieutenant. I forgot it." His reply was belated and breathless. "Sergeant Murphy has his hands full. There is a Wac in the orderly room says she's assigned here. To this outfit. The 999th Provisional Truck Company." Ramsey was nothing if not explicit.

Skip wiped his hands on a bunch of waste and nodded his understanding. Already his keen mind had leaped to the heart of the problem. "You say there's a Wac in the orderly room and Murphy has his hands full. I don't wonder that you are all shook up. Such carryings-on during duty hours!" He gave a disillusioned shake of the head. "I grieve to hear that the First Soldier sets such a bad example to the youth of our land whose parents have entrusted their tender young lives to the military estab—"

"That's not what I meant, sir," Ramsey turned a delicate pink. "Murphy ain't rasslin the Wac. What I mean is she's giving him a bad time, and—"

Skip patted him on the head. "Your loyalty is most commendable, even if it is misplaced. Let's go. I want to see this—this Babylonian orgy for myself. Button your pocket."

An outraged first sergeant met him at the door. "Sir, there's a Wac in your office who claims she's been transferred to our outfit. From the Engineers. What in the name of God are we gonna do with a Wac?" Murphy keened on the question.

The CO stifled a pang of conscience at having kept the great news to himself. "According to Ramsey here, you have already found some angles about what to do with the Wac."

Murphy cast a suspicious look at Ramsey's blush. "Like what?"

"Oh, like you had your hands full," Skip replied airily. "Now I don't inquire into your personal affairs, Sergeant, as you well know. But let's not allow romancing to clutter up the office during duty hours." He relished the rich empurpling of Murphy's thick jowls. "Ah, gay, mad impetuous youth. *Toujours l'amour*, eh, Murph?" He gouged the sergeant's ribs with a knowing knuckle and moved quickly into his office.

SKIP would never forget the first sight of the new member of his command. She stood by his desk in a rough imitation of attention. Barely five feet tall and fully that wide, she was a broth of a lass. Her age was hard to figure, but she would never see forty again. Her skin was weather-beaten and crisscrossed with the same network of fine red lines as that manifest on the face of the good Sergeant Murphy. The reddish eyes were small and the mouth was large. Her nose had been added as an afterthought and was set slightly on the bias.

Skip watched in amazement as the Wac attempted a crisp salute. Its effect was somewhat spoiled by a lack of coordination that caused her to knock her cap off. "Private first—er—Private Mayne reporting for duty, sir," she cried in a ringing baritone.

Skip moved warily to the shelter of his desk. "At ease, Mayne. Ah—sit down."

She fell into the chair and grinned crookedly at her new

boss. "Boy, I'm glad that's over. I always hate this reporting to a new outfit."

Skip glared with no fondness at the replacement and cursed himself silently in four languages for writing Disposition Forms.

"I note by your sleeve that you are a private E-1. Yet your raincoat has a stripe on it. Which are you?"

Private (or Private First Class) Mayne settled back in her chair and crossed chubby legs with great abandon. "Well, I'll tell you, Lieutenant, dearie. Actually, I guess I'm a six-striper." She paused expectantly.

Skip was still hung up on the "dearie" part of her answer and it was a moment before he could get loose. "You mean a master sergeant?"

Private Mayne bounced a little. "No, Lieutenant, dearie. Not a master sergeant. I've been a PFC six times and got busted every doggone time." The walls of the office vibrated gently to the blast of her unrestrained laughter.

Skip acknowledged the *bon mot* with a pale smile. Things were definitely on the mend in the 999th. Quotations about frying pans and fires leaped through his mind like startled gazelles. A slow, persistent throbbing at the base of his skull gave him a taste of the future. He massaged the back of his neck as he flipped through the Wac's records. She fanned herself with the retrieved cap and hummed quietly as she waited.

Skip raised his head and sniffed. A familiar aroma drifted across the desk from the songbird. "Have you been drinking?" he demanded.

Private Mayne giggled. "At this time of day, Lieutenant, dearie? Of course not." Then under the officer's cold stare, she murmured, "Well, I did take a small nip for my arthritis. Very good for arthritis." Having given the latest news from the medical world, Private Mayne yawned, laid her head back on the chair and closed her eyes.

Skip knew then that she and Murphy had much in common besides a khaki uniform. He watched the flushed face compose itself for a nap. If he didn't get her out of the office, she'd sleep all afternoon. He stuffed the records back into their jacket and yelled for the First.

Private Elsie Mayne was returned to the Wac barracks with a stern admonition to sleep it off and report for work the next morning. Lieutenant Shipp's parting words were strongly in favor of her appearing without benefit of analgesic.

When she had left, Sergeant Murphy lingered for a moment to have a man-to-man talk with the CO. His eyes were full of betrayed trust. He bore a striking resemblance to a pouting hippo. "How could you do this to us, Lieutenant?"

"Murphy," Skip declaimed bitterly, "I would as soon have a crate of baboons let loose in this area as to have Private Mayne in our ranks. But Colonel Carlson gave me no choice. It was either take her or a court-martial."

Choices like that were not completely foreign to Sergeant Murphy. He nodded his sympathetic understanding. "They found out about the stove?"

"No, surprisingly enough, the—ah—requisitions weren't mentioned—at least, not directly. You remember those DFs I've been writing and tearing up—the ones you said would get me into trouble? Well, one did."

"But how did it get outa the office? I'll skin that Ramsey alive."

Skip held up a hand. "It isn't his fault. He's been batting

out so many words on that typewriter I doubt if he ever really sees what he puts on paper. I guess I signed it the day Baker pulled the inspection. We were all a little shook-up then, anyhow."

For a few minutes they discussed the treachery of post engineers in general and Carlson in particular. Murphy brought the topic back to the problem that was bothering each of them. "Well, Lieutenant, we got her. Now what are we gonna do with her?"

"I haven't the faintest idea, Murphy. All I know is that she is now a member of our club. I suppose she can type—when she's sober. Give her something to do that will keep her busy and out of my hair."

"Well, sir," Murphy ventured, "no matter what the slangs and narrows of outraged fortune brings us, the future is gonna be mighty full of innaresting events."

"Murphy, you never uttered a truer word."

LIEUTENANT Melvin Shipp spent a restless night. When sleep came, it was disturbed by nightmares in which Private Elsie Mayne played the starring role. He awoke before dawn hoping that the Wac would not show up. For the first time in his short career as a company commander he wanted to list someone as a deserter.

Things seldom happen as we would like them to, however, and Private Mayne made a raucous descent upon the company at 0730. Paralysis of the orderly room's normal functioning set in at 0740. It wasn't long before Skip decided he liked Private Mayne, sober, slightly less than Private Mayne, loaded. She was a veritable whirlwind in khaki. Before 0930 the office furniture had been moved four times: and even Murphy, dazed and battered by the slangs and narrows, had been drafted into the clean-up campaign.

Ramsey, whose sense of humor was on the sadistic side, had passed the word that the new Wac was in the Jayne Mansfield class. The orderly room became Mecca for hot-eyed troops who were suddenly burning to check their records, inquire about duty rosters, or just to see what time it was. One long look at the Wac cooled both eyes and ardor. The glares sent in Ramsey's direction would have chilled beer. Bets were openly made as to his life expectancy. The men who lingered for a second, unbelieving look, regretted it. Private Mayne, using the same gentle tactics as those employed by Captain Bligh of the Royal Navy, pressed the laggards into service. Mops, dust cloths, wax and cleaning powders were distributed wholesale.

Like a good field marshal, Private Mayne's genius lay in supervision. She called orders and yelled encouragement from Sergeant Murphy's chair.

Skip welcomed the chance to attend a staff conference at Post Headquarters. There, Colonel Carlson presented him with the infamous DF and called him "Lieutenant, dearie," in quiet tones full of malice.

When he returned in mid-afternoon, Skip found an orderly room standing so tall that he was almost afraid to enter. The familiar KNOCK AND UNCOVER that has graced Army doors from the earliest days of hat wearing, was missing. In its place was a notice lettered in lipstick: WIPE YOUR FEET, YOU BUM!

Awed, Skip complied with the order. He entered the room timidly and stood transfixed. A miracle had been worked in his absence. The floors and windows gleamed. Curtains at the windows gave a cozy look to the place. The smell of wax mingled domestically with the aroma of furni-

ture polish. And over it all, a strong scent of some heady female type perfume. The only thing missing from the scene was a sampler with BLESS OUR HOME embroidered on it.

"What hath God wrought?" Skip murmured and moved through the strangely deserted room to his own office. There, the transformation was even more startling. His desk, polished to an unbelievable gloss, had been moved near the window. Gaily printed curtains rustled smugly in the breeze. His old beat-up chairs had been replaced by new ones of gleaming chrome and plastic. A green rug covered the floor. In the midst of all this change, one office fixture was more noteworthy than all the rest. It was Sergeant Murphy tidying up.

"Well," Skip observed as he surveyed his domain. To clarify his comment, he added, "Well well well."

Murphy gathered up the polish and rags, and moodily licked a broken blister. He reeked of cleanliness and bitterness. "That Wac," he stated flatly, "is a maniac."



A new name for the "Nine-ninedy-ninth."

Skip walked gingerly to his desk like a dog exploring a strange yard. "Well. All the good little fairies have surely been working today, haven't they?"

Years of discipline in the presence of idiot officers kept Murphy's trembling lips from forming words of heresy, but the memory of the long, hot day of manual labor unbecoming a topkick came to a rolling boil. "I never thought I'd see the day when one lousy Wac private could get a whole outfit unglued like this one. Lookit the curtains. *And* the flars in the vases. *And* the whole place stunk up with the perfume she spilled." Murphy sought the descriptive phrase and found it. "We hang a red light in the window, and we're in business."

Skip nodded sagely. "It does have a sort of sporting overtone," he admitted, "but it's cleaner than I ever thought it could be. Where is our little interior decorator, anyway?"

"Over to the messhall." Murphy's face split in a malicious grin at the thought of someone else on the receiving end of Mayne's crusading fervor. "Teachin the cooks how to cook. She says the noon meal wasn't fit for pigs. Of course," he added in the spirit of fair-is-fair, "she's right about that. Them cooks have been slippin more than somewhat."

Skip agreed that there was indeed room for improvement in the calorie department, and chuckled as he wondered how long it would take for the men to react to the new

order. He did not have to wait long. It took exactly one week.

PPRIVATE Mayne, with a fine disregard for conventional and traditional male superiority, turned a comfortable *status quo* into a madhouse. She was everywhere at once. If a man relaxed for a minute, he found himself on the business end of some instrument of torture. She went to favorite hiding spots like a ferret to a rabbit hole. The end result of her activity was that the messhall blossomed, the barracks gleamed, and even the motor pool enjoyed her presence.

It was this invasion of privacy that brought the discontent to a head. Sergeant Murphy announced the presence of a grievance committee and ushered them into Skip's office. The four men filed in, reported, and stood easy.

"You fellows got a problem?" Skip asked, sizing up the situation. Four heads nodded by the numbers. "You a committee or something?" Again nods. "Well, this looks like a long session. Might as well get comfortable. Sit down."

After a great clatter, the men got seated. Rabinowitz [he was the one with the curly hair] looked at Temple [he had the buck teeth] who looked at Chisholm [he had changed into clean fatigues, but the motor-pool aroma lingered]. They all looked at Gavin. He was the one with the pink hair and thick white eyebrows, known familiarly as Gabby—and with good reason.

"Lieutenant, sir," Gabby began formally, "we are a grievous committee which has been relegated by the other fellows to discuss a problem which has come up in the company. Sir."

Skip nodded with appropriate gravity. "Proceed on, Gavin," he invited, with a be-my-guest wave of the hand.

Gavin's prominent Adam's apple curtsied a couple of times. "Sir, irregardless of how the other outfits on this post consider us, we feel that we have did a pretty fair job of shapin' up."

"I was under the impression that I'd shown my appreciation," Skip said a trifle coldly.

Gavin shot nervous glances at the men on either side. "Oh, you have, sir," he protested. "You reely have. We dint come here to gripe about that." He folded his fatigue hat into a thick triangle and smoothed it out again. "No, sir, you been more than fair."

Skip was getting impatient. "Gavin, suppose you get to the point. I don't have all day. You're a grievance committee—grieve, already."

Gavin nodded and checked the position of his ends. Then he took a deep breath. "You been fair and square, sir. Right down the line. We—all of us—had the feelin that you was with us, and we trusted you." He paused, then blurted, "That's why we can't unnerstand your lettin that Wac in here."

"I think you've either said too much or not enough, Gavin," Skip observed in a quietly dangerous voice.

Four strained, white faces screwed up in an agony of apprehension. Gavin's eyebrows fluttered. He steeled himself to bear the force of the blast. "Lieutenant, this outfit is like a loony bin ever since that fee-male got here. We was doin OK before she come along. We done pretty good, too," he added modestly. "Good enough to get by the Colonel's inspection."

"For the last time, Gavin, get to the point. What have you guys got against Private Mayne?"

"She sticks her nose into the barracks, even. Makes us move stuff around—on our own time."

"She yaps alla time. A guy can't even stop workin to grab a smoke without she's got him on some kinda detail of her own. She's *runnin* this company."

"Thinks the motor pool is too dirty. Says the men oughta change clothes before goin to chow. Like the messhall was the Brown Derby or somepn."

"Tells my cooks how to cook. Brought in a whole batch of spices and junk."

Angry voices battered against each other, striving for recognition. It sounded like the complaint department of a department store right after Christmas. Skip controlled a grin and help up his hand for silence.

"Seems to me that you're just sore because somebody keeps on your tail. I agree that Mayne has things pretty well shaken up, but you have to admit that what's she done has improved the place."

Four heads nodded with obvious reluctance.

"Well, then. Why don't you guys go on back to work and we'll forget you ever beefed," the CO suggested with a great show of heartiness.

Four sets of amazed eyes focussed on him. "You mean you're gonna let that—that Wac stay here and get by with what she's doin?" Gavin was incredulous.

Skip nodded. "Yep, I sure am. Since you have made it official, I'll talk to her about your visit. I'll tell her that you fellows think she's been pushing too hard and suggest that she lay off, but," he shrugged, "I don't plan on kicking her out of the outfit, if that's what you mean."

Significant looks were exchanged. "Well, sir," Gavin offered with the air of a man who has done his best, "I sure hope she stays outa the guys' hair. Her just bein around is enough to get a man's back up. I don't know how the other fellas are gonna feel about you takin sides with the Wac, sir. It just might joppordize everything you worked so hard to build. Specially if some of em get so fed up with her that they go AWOL."

Skip had a low boiling point where threats were concerned. He snapped a pencil in half, the small sound cracking out in the sudden quiet. "You go back to those creeps that sent you over here and tell them for me that I will not be blackmailed. I run this outfit and I'll run it my way. Just because I let up on you people, don't get the idea you can push me around. Anybody who uses Private Mayne as an excuse to go over the hill will get a personal thrashing from me when he gets back. You can pass that word. Now get out of here and back to your jobs."

As they filed rapidly to the door, he added, "Incidentally, I'm holding each of you responsible for the men in your section. Keep them in line or you'll share in whatever they get."

SKIP felt very much alone. The weight of command was upon him. After a long period of meditation he called Private Mayne into his office.

"You want me, Lieutenant, dearie?" she boomed, her eyes twinkling with good will and eagerness to be of service.

"Yes, dammit, I want you to stop calling me 'dearie'," Skip yelled.

Mayne's twinkle disappeared. An opaque mask erased the grin. She snapped to attention and stared at a spot just above the CO's head. "Very well, sir," she said with hurt precision. "Sorry."

Skip threw his broken pencil into the wastebasket. "Oh—sit down."

Mayne sat stiffly on the edge of the chair and waited.

"I hardly know where to begin this, Mayne, but the men—well, they take a dim view of some of your activity here in the company."

Mayne was genuinely surprised. "What did I do wrong?"

"It's not so much that you've done anything *wrong*, necessarily," Skip answered carefully. "It's more—well, you've been making a lot of changes around here, and—"

"And high time, too." Mayne was obviously on firm ground. She leaned back in her chair and crossed her pudgy arms. "Get a bunch of men together without a woman's touch and they live like pigs."

"Now wait a minute. We're not so bad. We passed Colonel Baker's inspection all right."

"Hah!" Mayne disposed of that triumph with a flick of a finger. "*Men inspecting men*. The blind leadin the blind. You never would've got by if a Wac officer had pulled that inspection."

Skip had a hunch she might be correct, so he wisely refrained from arguing the point. "I'll admit that you have made some improvement in the area."

Mayne pounced on the note of approval like an owl on a mouse. "Well, then. If you admit it, what difference does it make if the—those hoodlums don't like it?" She batted her eyes at the CO. "After all, you're the boss, and I was just trying to please you."

Skip felt the smothering frustration that any male encounters when he tries to reason with womenfolk. "Look, Mayne," he began desperately. "Men don't like a woman coming into an outfit and changing everything all at once. Even if the changes are for the better, they get sore about having to make them. You're the only Wac in the outfit and—well, frankly, they resent your being here. They haven't had time to accept you."

Lieutenant Shipp was essentially a kind-hearted man. He did not enjoy making people unhappy. He avoided Mayne's eyes as he continued, "You see, I've got a lot of men to be responsible for. I can't afford to have them all shaken up because of you. They have complained about some of the things you make them do, especially on their off-duty time. I wish you'd lay off for a while. Until they get used to having you around."

The sound of a huge snuffle made him look up. Large tears rolled up from the depth of small eyes and spilled down the weathered cheeks. Skip was shocked. It was as if one of the Mount Rushmore figures had burst into tears. "There's nothing to start bawling about," he said with some irritation. "I simply asked you to tone down—"

Mayne's eyes screwed shut and her mouth opened. "They resent me," she sobbed. "They won't accept me. They *hate* me!"

Skip had two older sisters and knew that when a woman got the wheels under a crying jag, the smart thing was to wait until she ran out of gas. With a resigned sigh he handed her a handkerchief and settled back. "Blow your nose."

When the sobs had dropped to hiccups and the hiccups had faded into snuffles, Private Mayne reopened the discussion.

"I was afraid it would be like this, Lieutenant, dear-ah—sir," she said in the amazingly calm and rational tone women usually manage right after an outburst of irrationality. "It's



Visions of cell blocks danced in Skip's head.

happened before." She wadded the handkerchief into a tight, damp ball. "I know why I got transferred here. They didn't want me at Engineers. Nor at Ordnance before that. Nor at Fort Eustis, or Belvoir, or any place." She shook her head. "I swear to God, Lieutenant, it seems like I've been shoved from one place to another ever since I was born."

There was no self-pity in the resigned statement of fact. As if she were discussing a third party, Mayne continued in the same dead tone. "I couldn't get accepted in school when I was a kid. I was fat and ugly and no one wanted anything to do with me. Even my family couldn't stand me. It got so bad in high school that I quit and went to business college. I'm a good secretary. Made the best grades in the class. But I couldn't get any decent jobs because everything I do is wrong. I rub people the wrong way, seems like." She swallowed. "So when the recruiting people opened a place near home, I decided to come into the Wacs." She looked up at Skip with beaten eyes. "It's been the same damn thing in the Army, too. That's why I never stay in any one place very long. Every time I get transferred, they always say: 'You haven't adjusted, Mayne. The other girls won't accept you. You're not fitting in with the rest of them. We think you'd be better off somewhere else.'"

The naked longing in her eyes and voice made it Skip's turn to swallow. "Here, have a cigarette," he said, extending the pack as an adult offers a glittering toy to a sobbing child.

Mayne took the cigarette and held it to the flame of Skip's lighter. "That's why I started to get boozed up. I really don't have arthritis, Lieutenant," she confessed with a small grin. "I just get lonesome. When I get loaded it doesn't hurt so much. Sometimes, though," she brightened, "near payday when the other girls are broke, they come around for me to buy em a drink or loan some money. Once in a while they accept me, but it never lasts long."

She watched the smoke curl up in the still air. "I thought when I got here it would be different. Everybody knows this outfit is made up of eight-balls. I figured I'd have a home. I figured hell's bells, if anybody would accept an eight-ball like me it would be eight-balls like *them*." She jerked a thumb toward the window. "Looks like I figured wrong again."

They both fell silent. Skip was ashamed of himself. Only once before had he felt so guilty. That was when he was a

small boy. He had whipped his puppy for some fancied wrong doing and the reproachful eyes of the dog still haunted him on occasion. This was one of the occasions.

"Look, Mayne. Suppose we forget what I've just said. I am going to talk to the men this evening. Maybe I can get them to change their minds about you. Your changes have really improved the outfit. I think they can see that when I point it out to them."

The smile of gratitude that flooded Elsie's face made her almost pretty. As she left the room, Skip added, "By the way. Don't let those monkeys borrow money from you, and don't buy drinks for them. When they accept you, let it be for yourself alone. Okay?"

Mayne gave him the circled finger and thumb. "Okay, Chief," she said and closed the door smartly behind her.

AT the commander's hour that evening, Skip faced a sullen group. He had come full circle. The memory of the first tortured weeks of facing this same mob with the same look on their faces caused anger to well up in his throat in a green tide.

"I was approached by your grievance committee," he began without preamble, "and asked how come I let a Wac into this outfit. I'll tell you. Private Mayne got here just as you did. No one wants *her* any more than they want *you*. And in case you've forgotten, this is still the isolation ward of Camp Maxwell." The men began to listen. This was the commanding officer they knew of old. They had learned that when he took this tone, his words would bear hearing. "When the committee left," Skip continued, "I called Private Mayne in and talked with her. She was surprised and hurt that you men haven't accepted her. Matter of fact, she cried. She has been trying to help make the company a more attractive place. Every plan she has put into operation has been for your benefit. And even your precious committee admitted that there has been an improvement in this place since she got here.

"Mayne told me that when she knew she was coming to this outfit, she was glad. She figured that since you guys had been kicked around in other outfits you could understand how it felt to be unwanted, and would make a place for her. That's why she has been working so hard—to show you that she really wants to be a part of the organization. Now, since she knows that you guys have tried to get her kicked out of the company, she figures that she is a complete failure. She has been rejected by rejects—and you can't get any worse than that."

Skip paused to let it sink in. Distilled venom dripped from each syllable as he finished. "I hope you are proud of yourselves for turning thumbs down on Mayne's chances to prove that somebody does have a place for her. For myself, I'm ashamed of you. I wouldn't wipe my boots on any one of you. It seemed to me that maybe some of you were becoming human, but I guess you haven't changed. You're still scum."

With that, the Commanding Officer of the 999th Provisional Truck Company stalked from the room.

THERE was a Gung Ho atmosphere in the company area the next morning. Troops greeted their CO with deference and respect. Men went out of their way to call "*Ten-hut*" when he appeared. One misguided zealot in the latrine almost caused a panic by yelling the magic word.

Quiet efficiency was the order of the day in the various

sections. Even the food was better: and Chisholm's motor-pool gang showed up for the noon meal in clean clothes.

Murphy was most businesslike when he waddled into Skip's office and announced, "Chaplain Larson would like to see you a minute, if you're not too busy, Lieutenant."

"Never too busy to see the good parson, Murphy," Skip smiled. "Tell him to come in."

"He's already in," a voice announced as Chaplain Larson stepped from behind Murphy's bulk. "I had your First Soldier run interference for me."

A warm bond of affection had developed between Larson and Shipp. Skip liked the chaplain because Larson was human and understanding and patient with people. Larson liked Skip because Skip had matured. It was the chaplain's private opinion that immaturity, not original sin, was the cause of much of mankind's ills, and he was always pleased to discover signs of mature judgment in army leaders.

Larson sat in one of Skip's new chairs. "Got a problem, Skip."

"One of my men, I assume. Serious?"

"Well, as our British friends would say, it could be a very sticky wicket."

Skip fumbled a cigarette out of the pack. He cleared his throat noisily. "Well, let's have it."

Larson took an oversized pipe from his pocket and filled it. "You have a man by the name of Barlow. Wallace Barlow."

"That's right. Nice kid. Good-looking boy, too. He has never given me a bit of trouble. In fact, he is one of the few men who haven't. What has he done?"

"Seems like he has been—er—fraternizing with the natives. I have one of the natives and her irate mama out in my car." Larson gestured toward the parking lot.

"Oh, no!" Skip moaned. "Not a paternity claim! Not Barlow—he doesn't seem to be the Casanova type."

"The author of Proverbs has written that there are four great mysteries," Larson said dryly. "One of which is the way of a man with a maid. It seems that your boy Barlow has done a little research in the field."

"I don't suppose there could be a mistake?"

The chaplain shook his head. "Sorry. Mama has a doctor's certificate. Four months' worth of pregnancy. The girl has put the finger on Barlow and mama wants something done—quick."

"What about the girl? What does she say?"

"Mainly, she cries. But in between squalls I gather that she loves Barlow and wants him to marry her."

Skip drummed on the desk top with agitated fingers. "I suppose I ought to see them."

"I think you should. I'll bring them in."

Mrs. Matson swept into the room like a broad-beamed tugboat towing a dinghy. The dinghy in this case was her daughter, Inalee.

"I demand that something be done," Mrs. Matson shrilled as soon as she had cleared the doorway. "My poor, poor child being seduced by one of your horrible soldiers and now is in this terrible fix what am I going to do what will the neighbors think?"

"Suppose you sit down and let's talk this thing over," Chaplain Larson said when she had run out of breath. He ushered the two women to the chairs and performed the introductions.

"Now, Inalee," Skip said, "tell me about it from the beginning."

"Well, it was about five months ago that this man Barlow met Inalee at a service club dance," Mrs. Matson said, "And—"

"Look, Mrs. Matson," Skip interrupted firmly. "I don't mean to seem rude, but I asked Inalee to tell me about it. Suppose you let her do it."

Inalee was an attractive girl of about seventeen. Under normal conditions she might have been pretty. But her eyes were red and swollen from weeping and her face was drawn tight with embarrassment and shame. She refused to look at Skip as she began her story.

"It's like mother said. About five months ago, Wally came to a dance where I was a hostess. I like him. He seemed like such a gentleman."

"Hah! Gentleman!" Her mother exploded. "No gentleman would do what he did, Inalee. I've told you—"

"Please, Mrs. Matson. Let your daughter finish. Go on, Inalee."

"Well, he asked me for a date and we went out together. Every time he could get away from camp, he'd come over to our place and we'd go for a ride or something. And one night it—it just happened, that's all."

"What kind of men have you got in this army, anyway?" Mrs. Matson demanded. "A bunch of animals, that's what you've got. Taking advantage of an innocent little girl and getting her in the family way. You've got to do something about this, Mr. Shipp."

A flash of irritation showed in Skip's voice. "Mrs. Matson, unless the rules have been changed recently, it takes two to make a baby. Barlow didn't do it alone. Inalee, did Barlow rape you? Is that what you claim?"

"Oh, no!" Wide blue eyes met his for the first time. "Wally wouldn't do a thing like that! He told me he loved me and wanted to marry me, and—well, it just happened." She swallowed a sob. "It's as much my fault as it is his. I keep telling Mother that, but she blames him for all of it."

Skip studied the doctor's certificate of examination, and tried to figure out what to do next. This was a new experience for him. He called Sergeant Murphy, whose prompt appearance indicated that he had been listening at the door, and told him to round up Barlow on the doub'e. As they waited, Skip asked, "Just what do you want me to do about this, Mrs. Matson?"

"Do? Do? I want that young hoodlum to marry my daughter, that's what I want you to do. The least he can do is give his baby a name. And the least you can do," she shook a fat finger at him, "is to see that he makes an honest woman out of my daughter." She gazed at Inalee. "It is his fault entirely, no matter what my baby says. She's only a child and he took advantage of her."

"She's enough of a woman to get pregnant," Larson observed mildly.

Mrs. Matson turned on him. "You're all in this together! You're just trying to protect this so'dier. I never thought I'd see the day when a so-called man of God would take sides with a—a despoiler of virgins," she finished triumphantly.

"So far," the chaplain said, "it hasn't been established that this lad Barlow is a despoiler of virgins." He choked a little on the phrase. "Let's find out what he has to say about it."

"Are you calling my daughter a liar?" Mrs. Matson was enjoying her day in court. It was much riper stuff than the soap operas that filled their living room every day.

"I am not calling anyone anything," Larson said tiredly. He had been yelled at all morning and his patience was wearing thin. "In case you've forgotten, this is still a democracy. A man is innocent until proven guilty. And even a criminal is entitled to his say."

Mrs. Matson grunted disgustedly and clutched her purse to an ample bosom.

"It sometimes happens," Skip observed to no one in particular, "that girls try to force a man into marrying them by claiming he is the father of an unborn child when it is someone else entirely. There are laws to protect a serviceman against false paternity claims."

Mrs. Matson turned livid. "I have *never* been so *insulted* in my *life*! First you accuse my daughter of lying, then you insinuate she has—slept around town, and now you talk about protecting one of your precious soldiers! My Congressman will hear about this, young man. I'll tell him all about this. And about your part in it, too, Chaplain." Her thin lips bit off the sentence as if it were a thread.

Skip caught the merest indication of a wink from Larson. Inalee was staring at him with fear in her eyes. It was a relief when Barlow walked in.

Wallace Barlow had been a model soldier ever since he came to the company direct from an engagement at the post stockade. He was above the company average in mentality, and he carried himself like a soldier. Skip had a sudden pride in him. The lad looked like a recruiting poster. Short brown hair fringed a wide, intelligent forehead. Soft brown eyes looked directly at Skip, unafraid. He gave the impression of a man whose conscience is clear. When Barlow had reported with drill manual correctness, Skip told him to sit down.

Barlow noticed the others for the first time. "Inalee. Mrs.

"Well, I'll tell you, Lieutenant, dearie . . ."



Matson. What are you doing here?"

"We intend to see that you get what's coming to you, young man," Mrs. Matson informed him viciously. "You and your big talk about marriage, and leading my little girl astray."

Barlow looked from one to the other in amazement. "What is this?" he asked Skip. "What is she talking about?"

"She—rather, Inalee—claims that you're the father of her child. She's pregnant and says you're the one."

The color faded from Barlow's face. He looked numb. He shook his head. "That's not so, Lieutenant. I never laid a hand on her."

He turned to the girl. "Why do you say such things, Inalee? What are you trying to do to me? You know I never touched you."

Inalee moaned into her handkerchief. "You told me you loved me," she sobbed, rocking back and forth in her chair. "You said we'd be married. You told me it would be all right because we would get married."

"And I'm here to see that you do," her mother cried. "I am not going to have my daughter shamed in the community by somebody like you. We have a position to maintain in our town."

Barlow kept staring at Inalee. "Why? You lost your mind, or something? What are you lying for? Sure, I told you I loved you. And we talked about getting married when we got to know each other better. But I never—" he turned to Skip. "You got to believe me, sir. I had nothing to do with this. A few kisses, and—" he looked at the floor sheepishly. "You know, sir, a little smooching. But—no, sir. I am not the father of Inalee's child."

A knock on the door interrupted the session. Private Mayne entered the room carrying some papers. She flicked a glance over the sobbing girl and the outraged mother.

"I'm sorry to bother you, sir," she said to Skip, "but this is important."

"I'm busy. Bring it back later."

"It can't wait," Mayne was insistent. She handed the papers to Skip. "It'll only take a minute. The note on top explains it."

Skip muttered and took the papers. He read the top sheet and pursed his lips. "You're right," he said to the Wac, "this is important. Thanks for bringing it to me. You've done a good job."

Mayne murmured thanks and left. When the door closed behind her, Skip re-read the message and turned quickly to the sheets underneath. Still looking down, he said, "Inalee, when did you meet Barlow?"

"About five months ago, wasn't it, Wally?"

"Yeah. At the service club dance. I don't remember the date. Middle of May sometime."

"And when did the—when did you get pregnant?"

"The first of June. On our third date."

"You sure?"

Inalee showed the first sign of spirit. "Well, of course I'm sure. It only happened once."

Skip looked up from his papers and grinned. It was not a pleasant grin. "Mrs. Matson, you got mad a while ago when you accused me of calling your daughter a liar. I wasn't then, but I am now. Inalee is lying in her teeth and I can prove it. She says that Barlow got her pregnant on the first day of June. She's quite positive about it. But on that day, Wallace Barlow was in the stockade. According to the records, he was court-martialed on the 28th of May

and was confined until he joined the company in July. Unless your daughter got pregnant by mail, Mrs. Matson, you better look for another fall guy."

He sat back in triumph. Mrs. Matson stared at him in disbelief. Inalee stopped her mother's heated argument by laying a hand on Mrs. Matson's arm.

"He's right, Mother. It wasn't Wally at all. It was Tom."

Mrs. Matson crumpled slowly. Her face went white. "Whatever is the matter with you, child? You told me that he—that this Barlow—oh, how could you? You lied to me. Are you telling me the truth now, or is this more of your lying?"

"It's the truth, Mother. Wally never touched me—that way, I mean."

"Then why in the world did you claim it was Barlow?" Larson asked. "This is a pretty serious charge, you know."

"Yes, sir. I know it is," Inalee replied in a little girl voice. "But it—with Tom, I mean—it happened right after I met Wally. We went to a dance and Tom got me to drink something with vodka in it. I guess I got a little mixed up. I kept thinking it was Wally—and then is when it happened."

"Did you actually think you could get by with something weird like this?" Skip asked.

Inalee nodded into her handkerchief. "I told mother I was pregnant, and she got mad. I wouldn't tell her who the boy was and she kept saying she would make him marry me. That's when I got the idea of saying it was Wally. I wanted to marry him, not Tom. I wouldn't marry that Tom if he was the last man on earth."

Mrs. Matson continued to stare at her daughter as if the girl were a complete stranger. With an obvious effort she looked Skip in the eye. "I'm sorry, Mr. Shipp. I am so embarrassed I could die. I—I didn't know my child was a liar as well as a loose woman." Her thin lips tightened dangerously. "There's not much I can say, either to you or the chaplain or this innocent young man. But I can tell you that when I get this" her voice rose shrilly, "this whore of Babylon home, I'm going to whale the daylight out of her."

"Don't you dare call Inalee a—what you called her!" Barlow was on his feet, his hands clenched in angry determination. "You just keep still, Mrs. Matson. I've got something to say here. You people talking like we wasn't even in the room." He shook his fist at Mrs. Matson. "And you better not beat Inalee. You just better not, that's all."

He moved protectingly to Inalee's side and took her hand. She gazed up at him with a look of adoration and gratitude that would have melted the heart of a bronze statue. Barlow squeezed her hand tightly.

"I said I loved Inalee," he declared, "and I meant it. I want to marry her."

There was a collective gasp of amazement. Then Skip said, "You must be out of your mind. This girl just tried to frame you. She's pregnant by another man and tried to stick you with it. Do you want to marry a girl who would do a thing like that?"

Barlow nodded. "Yes, sir, I do. I really don't mind that our first baby won't be mine. You see, sir, I never had a home. I—well, I guess maybe I'm a bastard. So I know what it's like not to have a name. I was raised in an orphanage. Never knew who my folks were."

He stroked Inalee's blonde hair with a gentle hand. "I like kids," he continued. "Anybody's kids. Sure, Inalee made a mistake, but who doesn't? She said it only happened

once, and," he grinned at Skip. "I never had a girl that wanted me bad enough to do something like that. She must love me a lot. Besides, she thought it was me. She said so."

"What do you think, Chaplain?" Skip asked.

Larson rubbed a hand over tired eyes. "I don't know what to think right now. Except I'd like to talk with these youngsters—alone in my office," he added pointedly, looking at Mrs. Matson.

"Are you still interested in marrying Barlow?" Skip asked Inalee.

"Oh, yes," Inalee breathed. "More than ever, now. He can take my life, if he wants to. I'll make it up to you, Wally. Honest I will." She clutched his hand spasmodically.

"Don't worry about it," Wally said gruffly. "We'll handle it okay. Don't worry."

"Mrs. Matson, do you still want this despoiler of virgins in your family?" Skip could not resist turning the knife in the wound.

Mrs. Matson had the grace to blush as she looked from her daughter to the tall, straight-backed lad. "I don't know what to say. I don't mind if they get married, as long as they know what they're getting themselves into." She shook her head. "Of all the crazy, mixed-up—"

"Part of my job is to help both of them understand what they're doing, Mrs. Matson," Larson stood up. "That's why I want to talk with them. Well, Skip," he said, extending his hand, "thanks for your help. I'll let you know about this later."

"I want to thank you, too, sir," Barlow said. "I wouldn't have married Inalee if she had kept on lying. I wouldn't want a wife like that."

"Don't thank me, Barlow. Thank Private Mayne. She was the only one to put the dates together and prove you couldn't have done it."

After they had gone, Skip called Murphy into the room. "You know what this is all about. You've been listening at the door. You know that if it hadn't been for Mayne we would have a big, fat mess on our hands." He handed Murphy the note.

The sergeant read: "There's something fishy about this deal, boss. I don't see how Barlow could be the one. Check the date on the attached confinement order." Murphy grinned. "She did some good gumshoein, didn't she?"

"She did that. I'd take it kindly if the news of what she did got around to the other men—particularly the guys that wanted her shipped out of the company."

"Lieutenant, it will be a pleasure!"

S"OMETHING is in the wind, Murphy, and I don't know what it is." Lieutenant Shipp paced nervously in front of the first sergeant's desk, glancing out at the peaceful company street. "For almost a week now, these guys have been behaving themselves. Nobody in trouble. No fights, no griping. It isn't normal. They are up to something, Murphy."

The First Soldier had work to do and the CO was wasting time. He rolled his eyes toward the ceiling and said, "Yessir" to Skip's back.

The wearily polite tone did not escape old eagle ear. He shot an inquisitorial look at the bland mask. "You know anything?" he demanded.

Murphy shook his head. "Not a thing, Lieutenant. Nobody's done nòthin that I know about. Barlow's little case

was the last bit of excitement we've had. You worry too much. When we get a coupla days of peace, you don't enjoy it."

"Yeah. I know. But I'm the type that worries when the natives aren't restless. Besides, I got an itchy spot between my shoulders and that's a sure sign of trouble."

Skip paused in front of the open door and clasped his hands behind him. He teetered on his heels. The hunch that all was not well nagged at him like a sore tooth. "Well," he sighed, "what will be will be, as the feller says."

He went into his office to worry in private. The pile of papers on his desk reminded him that the show must go on. He started working on the training schedule. Just as he was getting interested in it, Murphy entered.

"Looks like your shoulder blades didn't lose their touch,"



The gentle tactics of Captain Bligh were employed by Private Mayne.

he said with a tinge of respect in his voice. "The gruesome threesome is back."

"I'm the seventh son of a seventh son," Skip said, relieved now that his hunch had proven true. "I read tea leaves, too. Send the delegation in."

When the three musketeers had seated themselves, Skip asked, "Where's the other member of the squad?"

"Oh, Chisholm don't know about this deal, sir," Gavin answered.

"If this is a repeat performance on Mayne," Skip advised, "you might as well leave right now."

The grievance committee looked embarrassed. "Sir, one of the reasons we come by was to apologize for what we said the other day." Gavin was unused to admitting error. Words came with difficulty. "See, we dint know about the—well, you know. We goofed and we're sorry about it." His voice trailed off.

"We feel pretty cheap, Lieutenant," Rabinowitz volunteered. "Specially since Mayne helped Barlow out of a mess."

"He's right, sir," Gavin was back in the discussion. "We feel just awful. Besides, the fellas sorta blamed us for the chewin you give the company." Gavin's eyes clouded with the painful memory of man's inhumanity to man. "They claimed we loused up the works by comin to see you—and it was their idear all the time! That was the coop disgrace."

"The what?" Skip was fascinated.

"The coop disgrace, sir. That's French," Gavin explained smugly. "A lidderal translation would be like 'the blow that killed father.'"

Skip inhaled the wrong way and choked. When he had regained his breath, he said, "That is the way the cooky crumbles at times. Now, what did you want to see me about?"

Gavin cleared his throat. "The problem to which we want to refer to, does not refer to Private Mayne. We want to present a make-believe type situation and see how you think it oughta be handled. A sort of hypothoeoretical case, sir, if you follow me."

"I am close behind, Gavin," Skip assured him. "Practically on your heels. Just what is this—uh—hypothoeoretical case?"

Gavin picked a loose thread from his pants leg. "Suppose—just suppose, remember—that somebody did some stealin in the company. What would be the best way to handle it?"

Skip made a steeple of his hands and tried to look judicial. A nagging little voice in his mind kept saying *I-told-you-so-I-told-you-so* like a broken record. More to drown out the voice than to answer Gavin's question, he replied carefully, "Well, offhand I'd say it would depend on a number of things. Frankly, I'd rather not make any snap judgment. Let's hear the rest of the story."

It was Gavin's turn to search for the right words. His eyebrows looked like fuzzy caterpillars as they writhed under the strain of thought. "See Lieutenant, you gotta remember that this is strickly make-believe like I said. But suppose that somebody like Swede here," he gave a side-wise jerk of his head, "Private First Class Rabinowitz, that is, found somebody had lifted forty-two bucks from his wall locker."

"Forty-three," corrected Rabinowitz.

"Okay. Forty-three. Anyways, suppose this happened and we done a little checkin and found out who took the money. Then suppose we found that the guy who done it was in a real tough spot and needed the dough bad on account of his mother's been sick for a year and his old man got laid off at the factory and there ain't no eatin money in this house. In the face of such exterminatin circumstances, what would you do as the company commander?"

Skip's troubled gaze roamed around the room and lightly touched the three committee members. Gabby sat with folded arms, the picture of a man who has completed a stirring chunk of oratory and is waiting for the applause to die down. Rabinowitz sat perfectly still, his dark eyes watchful. The third member of the trio looked worried sick.

"Stealing in a company, for any reason, is bad medicine," Skip said. "In this make-believe case of yours, the man should have come to me. If he was hard up, we could have helped him. That's what the Red Cross and the Army Emergency Relief are for. No one in service has to go in need if he has a legitimate case. And certainly, nobody

has any excuse to swipe money from a buddy to get by."

Gavin shot a triumphant look at Temple. "That is eggzackly what I told him, sir. In the round-table discussion, that is. The Old Man—ah—the company commander would of got you off'n the hook, I said. Irregardless of how much of a pinch you was in, you shouldn'ta did it. How come you dint tell the Lieutenant? I ast him. You know what he said?"

Skip opened his mouth to reply, but Gavin had gone on. "First off, he said he was scared to, after your speech the other night. Said he dint want you on his back, so he just pooshed the panic button and took the money. Then when he reelized he had got his—when he seen he was in a sling, he was scared to put it back and scared to send it home." Gavin's expression was a mixture of righteous indignation and disgust.

Skip passed cigarettes around, lighted his from the butt he had been holding. "I have a hunch you men have already decided what ought to be done, haven't you?"

Gavin grinned and waved the smoke away from his face. "Matter of fack, sir, we have. Some of the guys voted to work the fella over and after that, turn him over to the CID. But when the details all come out about the mother and all, we decided to settle out of court, sorta. So most of the guys figgered if the money was put back, we'd all keep our mouths shut—and keep the snoopers out."

"I take it you wouldn't exactly welcome a visit from the CID," Skip smiled.

"Lieutenant, there ain't nothin in God's green world that can get a compny shook up like the CID," Gavin informed him earnestly. "Not even a new Wac. We come to the conclusion that a CID investigation wouldn't do nobody no good. We dint want any trouble for you." He looked a little self-conscious as he added, "Besides, some of us have met up with them Gestapo boys before and we do not need to renew the friendship."

"Yeah," said Rabinowitz. "We figured we could handle our own problems without their help."

Skip knocked the ash off his cigarette. "Since this is all cut and dried and you men have already decided the matter, why even tell me about it?"

Gavin studied his nails. Temple and Rabinowitz helped him. "For one thing, you would have found out, anyhow. And it's like you've tole us. Some of us guys ain't got too good a record. Maybe we don't always agree with you, sir, but we all admit you been fair with us. We figgered we oughta be fair with you and let you know how we feel, so if somethin should come up, you'd know how we prolly would take care of it."

Skip jingled the change in his pocket. "I'm glad this is only a make-believe case. Otherwise I'd have to take some action. I appreciate your telling me about this, and I agree with Rabinowitz. We can handle our problems ourselves, if we know what they are. Pass the word that nobody should feel scared to come to see me about any personal problem. I don't hold grudges, and the Mayne thing is closed, as far as I'm concerned. Any man who's got a problem should come to me before he does something he might regret. I'll help anyone I can."

After the committee had gone, Skip got into action. That evening, a somewhat dazed and very grateful Temple boarded a train with furlough papers in his hand and AER money in his pocket.

It soon became apparent that the missionary team had spread the Word. Problems and their solutions became popular overnight. Skip began to feel like a social worker rather than a company commander. Chaplain Larson accused him of trying to corner the market.

One afternoon Skip was walking through the company area wishing he had never started the personal counseling service when he was stopped by a client.

Wallace Barlow's grin was made up of one part pride, one part embarrassment, two large parts of nervousness. "Sir, Inalee and I are going to get married."

Skip smiled in what he hoped was a paternal fashion. "I thought it might happen. When will it be?"

"In a week, sir. Chaplain Larson says it's okay. You can call him, if you want."

"He's already mentioned it, Barlow."

Barlow stared at the nameplate on Skip's shirt pocket. "I wonder," he began diffidently, "if you would mind being the best man?"

Skip was touched. "I'd consider it a real privilege, Barlow," he said sincerely. "I appreciate your thinking of me. But are you sure you wouldn't rather have one of your buddies? I mean, don't think just because I'm the CO you have to ask me."

Barlow shook his head emphatically. "I didn't ask you because you're the CO," he said. "There's no one else in the world I'd rather have stand up with me. You've been about the best friend I ever had, I guess. And that's why I asked you."

Skip gave him a friendly tap on the arm. "Aw, come off it," he said gruffly. "Who's the bridesmaid?"

Barlow squinted his eyes and grinned. "This'll slay you, Lieutenant. Inalee wants Private Mayne. And I do, too."

"We'll have to keep an eye on her," Skip chuckled. "Or else she'll be telling the chaplain how to run the service."

"It's possible," Barlow agreed, "but Chaplain Larson can hold his own, I think. Anybody who can tell Inalee's mother to keep still, can handle a Wac . . . Oh. Could we have a reception after the wedding? The guys would sorta like it."

"Why, of course. It's a good idea. Look. You go ahead with your plans. I'll get the reception lined up. Okay?"

"Yes, sir!" Wally beamed, saluted, and dashed toward the orderly room.

Skip watched him depart. "Just don't think of it as losing a son," he reminded himself aloud, "but more like gaining a daughter—and a grandchild."

With the thoughtful steps befitting his role of parent-hood by proxy, Lieutenant Shipp made his way to the messhall.

THE days preceding the wedding were totally unproductive so far as company business was concerned. Barlow was too quiet to be very popular, but after all, he was an eight-ball, and his was the first leap into matrimony. It had to be done just right. No campaign was ever more thoroughly planned. The cooks engaged in a flurry of preparation, the new dayroom was decorated under the beady eye of Private Mayne who alternated orders with deep rumbles of the Wedding March.

Even stolid Murphy was infected. On more than one occasion, Skip caught the First gazing with speculative eyes at the bouncing bridesmaid. It was possibly the beginning of a second torrid romance in the Eight-Ball Express.

Skip wandered, lonely as a cloud, through the rain-soaked company area, thinking wistfully that he hadn't had a real honest-to-goodness date with a real live girl for a long time. Suddenly he dreaded the wedding. He developed an early case of best-man jitters. He'd probably drop the ring.

But he didn't. The wedding was all that a proud parent could ask. The bride was misty-eyed with traditional adoration, the groom was appropriately nervous, and Skip had worried himself into such a state of numbness that he did everything right.

The only one of the party who was thoroughly enjoying every minute, wishing it would last all day, was Mayne. Her lips moved, soundlessly repeating the vows to herself, living vicariously the excitement that had accrued to a more fortunate sister.

After the ceremony there was much business of getting the wedding party back through the rain to the company dayroom where the reception was set up. Bowls of punch flanked a huge cake. No amount of scrounging had turned



The Law tried to stop the Eight-Ball Express.

up a saber, so Inalee cut the cake with a highly polished bayonet. In the midst of the festivities, Skip was called to the telephone. It was Colonel Baker.

"This is an emergency, Shipp," he bellowed. "There's a flood at Dillsburg. All the rain we've been having has weakened the levee and it may go at any time. The authorities have asked for help in evacuating the city. How many trucks can you get on the road and how long will it take you?"

Skip thought fast. "I can have fifteen rolling in an hour, Colonel."

"Good boy! Hop to it and get there as fast as you can."

Skip explained the situation to his men. Almost before he had finished, they were running for the barracks. As they piled out the door, he grabbed one of them by the arm. "Look, Barlow, you don't have to go. It's not that much of a crisis. You stay here with your bride."

"The company's going, sir," Barlow said. "I'm going. We'll need all the help we can get."

"That's very commendable, but we'll manage. Besides, what about your wife?"

The light of battle faded from Barlow's eyes. "Gosh," he murmured, "I forget to kiss her goodbye!" He turned to find her at his side. "Look, honey, I'll be tied up for a

while. Here." He fumbled in his pocket for his billfold. "Have Private Mayne take you to the guest house. Be back as soon as I can."

Skip, torn between the need for haste and the knowledge that Barlow could be spared from the task, appealed to the girl. "Inalee, he doesn't have to go. We have plenty of men for the job."

Inalee took her new husband's hand. "I don't think he'd feel right being here when everybody else is out there." She smiled at Wally and kissed him on the cheek. "Hurry back."

Gavin of the golden tongue smirked from the doorway. "Lieutenant," he said, "it don't pay to brandy words with newlyweds. They'll do what they was going to, anyways."

EXACTLY forty-eight minutes after Baker's phone call, fifteen trucks, a hastily organized field kitchen, gasoline and water trailers, and most of the company personnel rolled under the big sign and headed toward the stricken city.

The kitchen was set up on a hill outside Dillsburg. Skip kept two men to each truck. The rest grabbed their entrenching tools and joined the workers on the levee. Block by block, the trucks moved through the flooded streets, beginning with the waterfront section and working toward higher ground. It was wet, miserable and dangerous work. For twenty-four hours the Eight-Ball Express shuttled between the hill and the city, carrying people and their pathetic bundles of personal belongings to safety.

They came down the hill just as gray dusk was settling. A hastily erected roadblock lay across the highway. A man with a deputy sheriff's badge pinned to his overalls flagged them down. Skip climbed from the cab of the first truck.

"What's the trouble?" he asked.

"Water's too high," the sheriff answered. "Nobody gets back into town. We're bringing the workers from the levee now."

"There are people still in the danger zone," Skip said patiently. "We promised them we'd be back. We're going in after them."

"Look, soldier," the sheriff said, "that levee is gonna go any minute. High as that water is, the trucks'll drown out. Then you'll really be in trouble. You boys done real good. Now just stand back."

Skip faced the silent, red-eyed men who had left their trucks and were clustered behind him. "You heard what the man said. What do we do?"

Johnson said, "We crossed some pretty deep streams in Korea by taking the fan belts off. Water's gotta be real high to drown out a deuce-and-a-half if the fan don't kick water over the plugs."

Rabinowitz scoffed. "What's another couple inches of water? Let's go, already."

The maintenance chief chuckled softly. "Nobody drowns out the good ole Eight-Ball Express, man. We born to hang."

Chisholm licked a skinned knuckle. "You know us, boss. You call, we haul."

"I gotta go back," Gavin insisted. "I got me a blonde stashed out on a roof."

Barlow said, "I got me a wife stashed out at camp. Let's get this mess over with so I can start a honeymoon."

The men returned to their trucks. The sheriff yelled at them angrily. "I said you men can't go back in there. I'm the law here and—"

Gavin peeled the wrapper from a stick of gum. "You

in the Army, Mac?"

"Of course not!"

"Well, we are." He pointed the gum at Skip. "That extinguished lookin' gennulman with them purty gold pins on his shoulders is our boss man. He goes, we all go."

"But you'll get killed," the sheriff cried in desperation.

Gavin flashed him a toothy smile. "Then you can court-martial the Lootenint for destroying govment proppity."

The trucks blasted through the barricade.

IT was early the next morning when the 999th Provisional Truck Company limped through the gates at Camp Maxwell. Tattered canvas fluttered from the ribs of tarpaulin arches like battle streamers. As they swung by headquarters, each dirty, bedraggled man sat a little straighter and quietly sneered at the neat khaki-clad soldiers on the street. The Commanding General stood in front of the headquarters building and saluted the convoy as it passed. Lieutenant Melvin (Skip) Shipp in the lead truck returned the salute with exhausted precision. His eyes were fixed upon the far end of the camp where a huge black-and-white sign spelled home.

Not since the Alamo had a military exploit rocked Camp Maxwell as much as the conduct of the Eight-Ball Express during the flood. A note of respect crept into the voices of other commanders when they talked with Skip. The heroic rescue work was duly publicized in local papers, and television trucks visited the area to get first-hand interviews with the heroes. Skip received several congratulatory messages from civil and military leaders and the headquarters rumor mill was busily grinding out the information that The GENERAL was planning to decorate the entire outfit.

In the midst of all this favorable attention, the Eight-Ball Express personnel affected a few of the mannerisms that mark a real tough outfit. No one left the area without being inspected by his friends for sharpness of uniform. Scarves were worn at all times. Skip had a hunch they wore them to bed.

All in all, the 999th Provisional Truck Company was an outfit to be proud of. Skip was human enough to enjoy the requests that flooded in from other units from men who wanted to transfer to his company.

The men had heard of the possible decorating ceremony and prevailed upon the first sergeant to give them some practice in the parade ground procedures. Second Lieutenant Melvin (Skip) Shipp, Infantry, ignored the pile of papers on his desk and laid down the folder of press clippings. He swung his chair around to face the open window. Outside in the blazing sun, Sergeant Murphy drilled the company. His voice came shimmering through the air: "Hup, hoop, heep, hope!"

Skip watched the rhythmic flashing of legs. His eyes glazed. The electric fan on the floor beside him droned sleepily, rustling the papers on his desk. His head nodded and he eased into the delicious twilight of half sleep. A dream formed vaguely in his mind. He sighed and gave himself up to a good healthy snooze when the phone blasted him awake.

A metallic voice rasped in his ear. It was the noble battalion commander: "Shipp, come on up to my office. Right away! I've got a little job for you."

Skip cradled the instrument gently. "This," he said to himself, "is where I came in."

SYMBION*

PAY-OFF FOR SOLDIERS AND SCIENTISTS



Toy balloon targets developed by ORO are surprisingly tough, can only be penetrated by a projectile moving with considerable force

An infantry-armor team prepare to "assault" the balloon-target system at Fort Stewart's tank-firing range



Fort Stewart's Former Commanding General Finds Benefits in Soldier-Scientist Relationship

Brig. Gen. E. H. F. SVENSSON
Former CG, Fort Stewart, Ala.

THE articles which follow are more than a report on the development of a new target system and on a very effective training and testing system; they are also the record of an informal and largely unofficial merging of the efforts of soldiers and scientists to improve the combat readiness of our Army.

I leave the detailed discussion of purposes and consequences of this program to the authors, but I wish to emphasize certain aspects of the already developed balloon target system and the article describing its incorporation into Fort Stewart's training program.

From the military point of view, this system was developed to improve the advanced unit training that Fort Stewart must provide to most of the Regular Army's tank and armor units in First, Second, and Third Armies. The soldiers involved in the development of the system and the author of the first article are Armor officers. Consequently, Major Grimm discusses this system in terms of use by tanks and tank-heavy combined-arms teams. However I would emphasize that this new system has equal, if not greater, application and value for training infantry units and infantry-heavy combined-arms teams. Since it is cheaper to set up and to operate than the old silhouettes and panels, and particularly because it is the only target system available to units in the field that can present realistic, killable, and scorable targets for both small-arms fire and for high-explosive fire, it has great value.

There are tremendous benefits to be gained by combining the efforts of our scientists engaged in appropriate military research projects with the efforts of our training units engaged in routine training. As I have said, this killable balloon target (the first in a complete "tactical target system" now being developed) evolved from the informal, cooperative efforts of a small group of scientists from Operations Research Office and the Commanding Officer (Lieutenant Colonel Curry N. Vaughan) of the 17th Armor Group and his staff. The ORO team, headed by Mr. Andrew J. Eckles, III, was seeking factual data of a type that

could be put into use in ORO wargaming using electronic data-processing equipment. They were interested in realistic data such as average reaction time for a tank crew to get off an aimed round at a surprise target and the average number of rounds it takes for a trained crew to hit various types of targets. The ORO group also was interested in related fields, such as use and effectiveness of communications under "quasi-combat" conditions that approach as nearly as possible those found on the battlefield.

Colonel Vaughan and his staff were primarily interested in running the most effective training program possible with minimum expense in both dollars and overhead personnel. Mr. Eckles provided the initiative by approaching Colonel Vaughan and seeking permission to use some of the 17th Armor Group's normal combat firing exercises as a vehicle for ORO to obtain initial experience and data. Out of this informal meeting grew a close working relationship that imposed no demands on Fort Stewart's military complement that did not almost immediately pay off in greatly improved training. From the military viewpoint only, this close cooperation between soldier and scientist, even with each striving to reach separate immediate goals, has been one of pure and immediate profit. Dr. Ellis A. Johnson, Director of ORO, has also assured me that from the scientific side, ORO has acquired sound data that have already paid off in studies his staff is making of methods for increasing our future combat effectiveness.

Perhaps I should also mention that the work reported in the following articles is only a first step. For example, through these same methods of soldier-scientist cooperation, we are developing a moving-target system for multiple-weapons use. If successful—and present indications are that it will be—this new equipment will provide not only a much more realistic and versatile moving-target system but also greatly reduce the maintenance and cost of the current moving-target training for armor.

Based on our experience here, I can only recommend and urge all commanders to take advantage of opportunities to work with our military research teams and to welcome them when they wish to ride along on normal training exercises.

* SYMBION was coined by Andrew Eckles of ORO to express the mutual advantages of a close soldier-scientist relationship

ORO developed target system for combat firing exercises
How scientists derive data from Army training programs

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NEW TARGET SYSTEM FOR COMBAT FIRING EXERCISES

Major WILLIAM C. GRIMM

WORLD War II proved, and the Korean conflict confirmed the need for more effective training methods. Reliable experience data have been gathered that demonstrate that the initial engagement or action is the big killer. Soldiers who survive this first experience quickly learn those things that should have been learned before they entered combat. Thus, only the survivors of this initial engagement have the opportunity to fill in the gaps in their training experience and increase their chances of survival.

Brigadier General S. L. A. Marshall compiled some startling statistics on the small percentage of riflemen who actually fire in combat. It has been accepted that one factor that contributed to this circumstance was the practice of training our riflemen to fire only at known-distance ranges, against clearly defined targets. Transition courses were introduced, and now we have Trainfire courses that condition the rifleman to fire against more realistic targets.

Until the developments we shall describe, little had been brought out to provide a counterpart to Trainfire for the realistic training of combined-arms teams in the use of small arms, mortars, and artillery in live-fire combat exercises. We are all familiar with silhouette and panel targets and we know that after any live-fire combat problem has been run some

of the targets are riddled while others are unscathed. It is generally accepted that silhouettes and panels do not confront the rifleman and gunner with realistic or challenging targets. Even the mechanical knockdown silhouettes are unrealistic, besides being expensive and unreliable.

During the winter of 1958-59, a group of military researchers from The Johns Hopkins University's Operations Research Office visited the 17th Armor Group at Fort Stewart. Together we evolved a target system that has been used successfully in the routine training of tank units, tank-infantry teams, and assault-gun platoons taking their advanced unit training and Army Training Tests.

The "enemy" must be killed

The target system consists of toy balloons that can be purchased at any dime store; a target-cloth sack; two pieces of scrap wood per target nailed together into an X to serve as a base or anchor; half-pound blocks of TNT to simulate enemy guns firing at the training unit; detonators, firing control boxes, and the necessary wiring to fire the "enemy guns" on command by detonating the TNT from a safe distance.

When inserted into the target-cloth sack and inflated (we use the compressor on a 2½-ton truck) the balloons have the remarkable characteristic of refusing to explode unless they are penetrated by a projectile moving with considerable force. For example, they will withstand the impact of a pellet from an air pistol at 8 to 10 feet. In short, these cloth-encased toy balloons make a very realistic target that can be killed only when penetrated with approximately the force required to at least wound a soldier.

Major William C. Grimm, Armor, is in the G3 Section, U. S. Army Armor and Artillery Firing Center at Fort Stewart. He was commissioned from OCS in 1942 and served with the 16th Cavalry in Europe as platoon leader and company executive. Since then he has been company commander, battalion and armor group S3, and G3 training officer.

Remarkably enough, concussion alone, as from mortar or high-explosive blasts, will not cause them to burst. They will burst if the blast hurls a fragment or a sharp rock or stick into them, or if they are struck by a bullet—just as a soldier so struck would go down.

In addition, the cause of the casualty (whether by small-arms fire or by fragments) can be determined by inspecting the target bag. This also provides additional information both for scoring courses and for determining effects of various types of weapons.

These balloon targets are extremely easy to emplace in any desired grouping or pattern by dropping them off the back of a 2½-ton truck. Placing the charges and detonating systems to simulate enemy gunfire is the slowest part of setting up the range, but with buried mains leading out into the range impact area, surface leads can be laid quickly to provide practically any simulated enemy disposition. The labor of setting up the range can be handled by fewer men and in less time than setting up silhouettes and panels. There is the added advantage that for each running of the course, the enemy dispositions can be changed completely.

The cost in dollars is of vital concern to all of us. To set up an appropriate target system for a live-fire problem by a reinforced tank company in the attack costs \$18 for the balloon system. Silhouettes and panels to provide comparable but far less realistic "enemy" situations would cost approximately ten times that.

Targets that shoot back

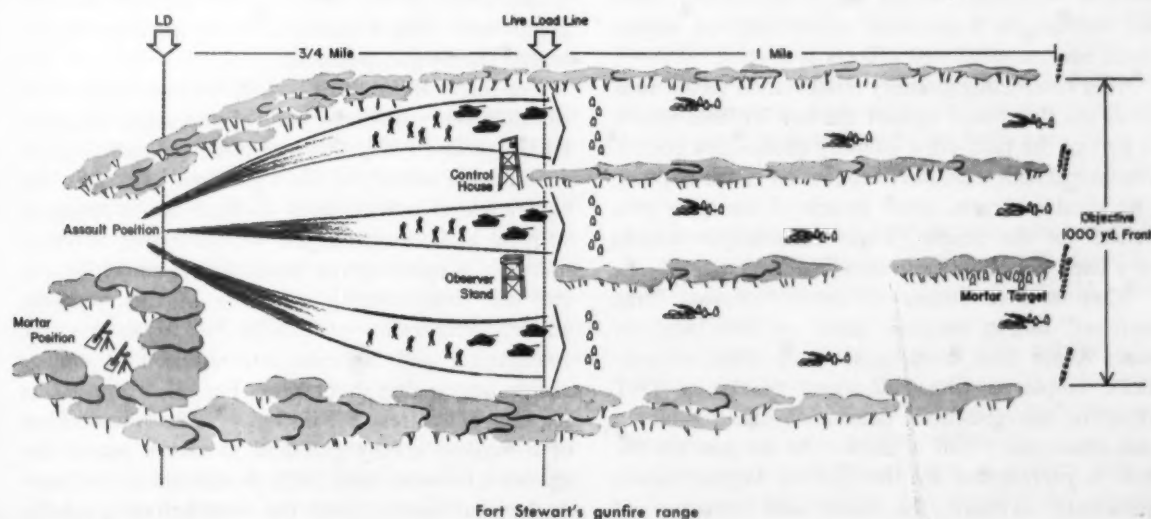
Aside from its other features, the all-important advantage in this system is that it confronts the soldier with a realistic battlefield picture. The scene

confronting him is almost as empty of any enemy as the real thing. Further, he faces a foe who "fires" at him, who reveals his general location only by his fire. Finally, he fires at targets that if hit register a positive kill, but which if not penetrated remain to taunt him when the problem is over.

As I said, this target system was developed cooperatively by Fort Stewart and Operations Research Office. This effective cooperation between scientist and soldier was undertaken with the hope of both the trainers at Fort Stewart and the scientists at ORO that such a close relationship at the basic working level would prove mutually beneficial. The research people, for example, were interested in developing a "quasi-combat" course from which they could obtain performance data on tank-infantry teams; we at Fort Stewart were interested in any innovations or helpful gadgets that the facilities of the military analysts might be able to provide to further enhance our advanced training programs.

Now we feel we have profited from our work with ORO, not only in those fields of primary interest to the scientist but in other aspects of the training program as well. As I will show, we have taken the equipment and ideas, together with the experience gained from our joint efforts, and utilized them in other phases of our training where we felt their use would be beneficial. From the trainers' standpoint, then, the seeds planted during the earlier phases of the Fort Stewart-ORO program have germinated into something capable of much wider use, and have already been incorporated into a variety of training problems.

At Fort Stewart the balloon target system has been incorporated into the tank-gunnery training program. The system has proved its value and is



used for field firing exercises, for individual tank crews, tank platoons, tank companies, and other units. This system will be used during the live-fire portion of the reinforced tank battalion's Army Training Test. Its possibilities appear to be limitless. It has repeatedly proved its tremendous value in providing realistic combat firing experience for tank crews, tank-infantry combined-arms teams, and for airborne assault-gun crews who have used the target system here during their winter and spring training.

Our experience with armor units has shown that proper or effective use of this target system can be made only after the gunners have progressed through the normal qualification table firing. These gunnery qualification tables have proved to be sound, and they provide the essential basic firing experience and skills.

Statistics at Fort Stewart's firing center reflect the fact that those units whose commanders have stressed dry firing and subcaliber exercises during their unit gunnery training produced more effective tank gunners, and thus a more effective tank crew, when measured in terms of scores made while running the live-fire combat exercises utilizing the new killable targets. In addition, these units were able to complete their service tables with fewer rounds expended per man during the preliminary practice-for-record firing and thus build up a reserve of ammunition that they later used effectively during combat-firing exercises.

Sequence of training

Now for the sequence of training that has produced the best results. As previously indicated, preliminary gunnery training, followed by concentrated exploitation of subcaliber table firing, and then service table firing, proved to be an essential and a very effective beginning. At this stage, particularly, close and enthusiastic supervision by officers and experienced noncommissioned officers is a must.

After completing gunnery qualification tables, tank crews are first pitted against the new killable targets as part of the tank-crew gunnery proficiency course. The course had, until the introduction of the balloon-type killable targets, seven panels of the types prescribed for the course. Three killable-type targets have been added to these standard targets.

When used as targets for tactical combat firing exercises, dug-in antitank guns are simulated by using 90mm fiber containers on the ends of short sticks, emplaced with half-pound blocks of TNT wired for remote-control detonation that produce a flash effect and a puff of smoke. At the gun site the crew is represented by the balloon targets, which realistically simulate the heads and shoulders of

dug-in enemy. As the tank advances into range, the control officer detonates the block of TNT. The tank returns this "fire" and the time from blast to delivery of return fire is recorded and (along with all hits) is computed into the over-all tactical score when the problem ends.

Remember that in combat the tank commander is the key man of the tank crew subjected to enemy AT fire. Unless he anticipates the possibility of enemy action and reacts without delay, the crew will not be alerted and prepared to get off that all-important first round. Thus, for the tank commander, even more than the gunner, training to react to enemy fire rather than to a clearly visible target is vital to survival on the modern battlefield. Therefore, it is logical that the transition from silhouettes and panels to the new killable targets be inaugurated on the initial tank-crew gunnery training.

The need for transition training in progressing from clearly visible panels to more realistic field targets was strongly indicated by the scores achieved at Fort Stewart when the killable targets were introduced into the tank-crew gunnery proficiency course. When the course included only panels and silhouettes, on the initial run an average of 13 out of every 14 crews would complete the course with passing scores. Upon introduction of the killable targets, on the first run an average of only two out of every five crews running the course made a passing grade.

The live-fire field problem

After successfully completing their gunnery proficiency course, tank crews are required to run a live-fire field problem. For this problem a tactical situation is outlined; however, the action required is only that of making a simple direct-approach assault of a limited objective area. The tactical background is introduced at this stage only to provide the tank commander with a logical basis for anticipating potential enemy gun positions.

For this exercise three tank crews run the problem simultaneously on three parallel and adjacent lanes. Although essentially they are three individual crews running the course, at the same time they gain the experience of having tanks on their flanks engaging surprise and unseen targets with live fire, in effect mutually supporting one another's advance. This is the first combat-firing situation in this program where, under an assumed tactical situation, the tank commander and his crew are required to engage enemy targets that shoot back. For this exercise, the requirement to respond instantly to the muzzle blast of a masked enemy gun and to return aimed fire against a recorded-time factor is stressed in the introductory orientation given the crew before it partici-

pates in the problem. In short, there is introduced the pressure of the combat requirement for instant response with aimed return fire before the enemy can get off his second round.

After this individual tank-crew exercise, the tank platoon is next required to run an attack problem. In this the enemy consists of the simulated dug-in antitank guns protected by the killable-target "dismounted infantry" disposed in logical defensive arrangement for close-in defense of the guns. The guns are positioned to face toward the attacking tank crews. As the tank platoon comes into range, the control officer detonates the half-pound block of TNT emplaced at the site of the simulated antitank gun that logically would first engage the attacking platoon. The platoon leader and his tank commanders are at liberty to return this fire, and their reaction time is noted. As the platoon continues to advance, two more AT guns in successively deeper positions open on the platoon, and again reaction time is noted. When the problem is completed all hits are counted to determine the effectiveness of the tank fire.

So far, experience indicates that when they first run this course, the average reaction time for tank crews to engage the initial target is 35 seconds. After crews have run the course several times, reaction time reduces to approximately 15 seconds. We think if our tank crews are to survive in combat, reaction time must be reduced to not more than 10 seconds.

Tank-infantry teams

After graduating from the tank-platoon course, the platoon is combined with infantry, and the platoon leader has direct mortar or field artillery support on call. Then he must run a new course in a different area, using all his available firepower to accomplish his combat mission. Here the infantry is shown the need for long-range area fire support against targets that are individually masked, but whose general location is disclosed by muzzle blast of antitank weapons. As the platoon advances under cover of supporting mortar or artillery fire, individual targets become detectable. Most soldiers who have not been exposed to close combat are amazed at how many balloon targets fail to be ruptured by the high-explosive fires of mortars or artillery and the tank guns in support of their advance. This experience drives home realistically the fundamental need for suppressive fire support of any advance against a dug-in position.

When the reinforced tank-infantry platoon exercises end, the tank company is combined with supporting infantry, to include recoilless rifles, mortars, and artillery support, as available. The tank com-

pany commander must conduct a live-fire attack on an organized position outlined with simulated antitank guns and killable balloon targets as we have described.

In these problems three firing lanes of substantial widths are set up with targets. Safety factors have been included in such a fashion that each of three platoons has a relatively wide latitude of maneuver within its lane without imposing undue restrictions or a cease-fire on any other platoons in their respective lanes. Thus the problem allows the company commander a wide variety of maneuver, and no school solution is prescribed. Again, in this problem as in the one for the platoon, the fire of supporting direct and indirect weapons is expected and feasible, so that all components of the combined-arms team actively participate in the attack and benefit from the realism provided by using killable targets.

The training program for the tank battalion concludes with the reinforced battalion's Army Training Test. We plan to include a battalion live-fire exercise in this test. In this exercise the killable target system will again be employed to determine the effectiveness of the combined fires used by the tested battalion commander in supporting his attack. The number of target kills will be recorded and computed into the battalion's over-all test score.

Benefits of the system

In summary, the killable target system has these advantages:

- ▶ It employs targets that are realistically difficult to detect.
- ▶ It trains the tank commander and the gunner to react to fire from concealed weapons.
- ▶ It acquaints all participating troops with the limitations of high-explosive fire and teaches them the necessity for delivering suppressive fires on "empty areas," even though there are no clearly defined targets.
- ▶ The balloon targets allow realistic and positive scoring because they are "killed" when penetrated by projectile fragments or small-arms fire, but at the same time they can withstand the effects of concussion.
- ▶ The system allows a positive means for measuring a crew's weapon-reaction time, as well as the true effectiveness of all types of firepower brought to bear on the targets.
- ▶ The system is flexible, it permits the rapid erection of an almost unlimited variety of enemy dispositions, and requires little time to prepare. Range-personnel overhead is reduced to the minimum.
- ▶ The target system is cheaper in dollars than the silhouette-panel system; for an average company

combat firing exercise it costs approximately one tenth as much.

All officers who have come into contact with this target system think it has the potential of significantly reducing the very heavy first-engagement losses our troops have suffered in the past. It better conditions trainees to visualize the atmosphere of the battlefield, to deliver effective suppressive fires, and to react quickly and effectively to previously undetected surprise targets. Training with this target system should save countless lives that in the past have been lost by unblooded troops in their first combat action.

As said earlier, this target system was evolved at Fort Stewart through the combined efforts of a dedicated group of soldiers and scientists working from the same basic stepping stones toward separate goals, but goals that had a common objective: improved national defense. This relationship of soldiers and scientists resulted in a major improvement in training methods, with no delay in the conduct of a normal training program. The long-range benefits in the field of scientific research of military requirements for modern war are next discussed by Andrew J. Eckles, III, of the Operations Research Office.

SYMBION: MUTUAL ASSISTANCE TO SOLDIERS AND SCIENTISTS

ANDREW J. ECKLES, III

MAJOR Grimm has described some of the advantages the soldier can obtain when there is real cooperation at basic working levels between soldier and scientist. I should like to illustrate some of the counterpart advantages that accrue to the military researcher when he teams up with the soldier to utilize the already available facilities of the Army Training Programs as sources for the experimental data he needs. Once the researcher has collected the data, his use of those materials may be altogether unrelated to the immediate needs of the participating post. This divergence of effort after a Symbion program is to be expected and encouraged—for this is one of its most fruitful results. We reach divergent

goals by cooperating on the basic stepping stones.

The researcher no longer need ask "whether field experiments are necessary." Our wargaming and other analytical techniques have progressed to such a high degree that their appetites for realistic (and dependable) performance data have outstripped by far our capacity to supply such input parameters. And yet, without adequately reliable input, our analytical efforts become only armchair exercises in the realm of science fiction, and our results of no more value.

At Operations Research Office we have been called a Think Company with our heads in the clouds. Perhaps this is true, because primarily we are concerned with the task of providing guide lines for Futurarmy. But Futurarmy must be planned for and built today. To do this we must have our feet on the ground so that we may use our analytical tools of mathematical models and war games to logically manipulate present realities (in the form of input parameters) to extrapolate future needs.

Andrew J. Eckles, III, is a graduate in Psychology of the University of Louisville. For three years (1952-54) he was associated with the Armor Human Research Unit at Fort Knox. Since December 1954 he has been on the staff of Operations Research Office of The Johns Hopkins University.



Captain Allen Edwards sets off gunfire simulators from control point. ORO's Andrew Eckles is observing the problem

A self-imposed restriction

Unfortunately, however, so far extremely few field experiments have been conducted that can provide us with reliable estimates of weapons systems performance under these realistic, or "quasi-combat" conditions. And this in spite of the array of facilities that exist, at least on paper, for obtaining such data. To some degree this is a self-imposed restriction, because of the rather stringent requirements we must apply to our input data.

For example, suppose we are concerned with the outcome of a combat situation involving a tank-infantry team. We must know the behavior characteristics of each of these weapons systems, including their human operators, under the anticipated conditions of combat. This means that weapons characteristics such as manufacturer's performance specifications, qualitative matériel requirements or military characteristics are of very little value in predicting combat performance. For that reason we cannot permit ourselves to become involved with such irrelevant factors as maximum rates of fire or hit probabilities when these are tested only under standard range conditions that are devoid of the confusion, stress, and other conditions of battle. Nor can we accept

the necessarily biased opinions of "educated intuition," for we have far too much at stake. We can only depend on data obtained from field studies that utilize, in so far as possible, quasi-combat conditions. That is, we must obtain our basic input numbers from situations that reproduce, to the greatest degree possible, those conditions found on a battlefield.

The "Operational Field Experiment," then, is to military operations research what the laboratory is to the physical sciences. It is the basic source of information used in our analytical techniques; it is the proving ground for our deductions or hypotheses; and, as such (outside the final crucible of combat), it is the sole basis for the validity of our work. Although data obtained from such controlled field experiments are urgently necessary in great quantities, it has previously been only a utopian dream to consider the conduct of the required number of field studies because of limited research personnel, limited equipment and troops, and limited funds for such research. Standard-type field studies and even agencies such as Combat Development Experimentation Center cannot hope to provide more than a token effort toward supplying the quantities of input data required.

In addition to these limitations on experimentation, usually it has taken a minimum of two years, and more often four to six, from the time a field experiment was a "gleam in the eye" or an expressed need of some researcher until a completed report was available to the user. We cannot continue this luxurious waste of time between expressing our need for particular types of data and receiving them.

The problem of limited resources

Faced with this need for vast quantities of weapons-system performance data within limited time frames, we have to reckon with the very real fact of limited resources for the collection of such data. All our field research facilities are overtaxed, and still we are falling farther behind our requirements for the basic foundations upon which rest the science of military operations research.

With our available resources, we can perform only a very few large-scale controlled field experiments. Therefore, it is imperative that we conduct such studies only in those fields that are most crucial to our long-range planning program. But we cannot afford to ignore the much larger field of data collection, where the need is just as urgent but where our limited resources require that we conduct the necessary studies on a shoestring.

We feel that we have, during the joint ORO-Fort Stewart effort, developed to a workable stage such

economical methods, which are capable of utilizing existing military facilities (in the form of appropriate phases of the Army Training Program), as sources of much of our sorely needed input data.

What I say here, then, is essentially a plea for developing a balanced program of research for obtaining our basic working numbers—a balance that would permit us to reserve our most powerful data-collection techniques (that is, controlled field experiments) for the few most critical areas. Then we can resort to the quick-and-dirty or shoestring techniques for the vast majority of our needs.

Symbion is the concept we at ORO have evolved to try to solve the two problems of the expense (in available research personnel as well as dollars) of usable data and the time required to obtain new data. The concept of Symbion is perhaps most accurately described from the scientist's viewpoint as "superimposing experimental designs and data collection techniques on carefully selected (and sometimes modified) phases of the Army Training Programs." But as indicated by the derivation of the term, Symbion is not purely a parasitical relationship on the part of the research agency involved. It is, as attested to by General Svensson and Major Grimm, a mutually beneficial cooperation in which the soldier as well as the scientist gains from participation.

Symbion's basic purpose

From the researcher's point of view, the basic purpose of Symbion is to increase the efficiency of our research facilities; that is, to get the very maximum out of every research dollar or research man-hour (and it is difficult to say which is more scarce at present). From the soldier's point of view, Symbion could be described as "letting the scientists work along with us and chances are we can make good use of some of their ideas and equipment to increase the realism of our programs and in the long run maybe even save us work."

Symbion attempts to develop methods and equipments that will heighten the realism of the combat training program to such a degree that the conduct of selected phases of the normal training cycle will provide the researcher with field situations adequate for classification as quasi-combat. Once this is accomplished to the necessary degree, then we can develop data-collection techniques and analysis methods that, when used together with these quasi-combat courses, can provide the military researcher with the required input data within a reasonable period of time—measured in months rather than years—from an expressed need. A developed program of Symbion is the only hope we have in the foreseeable future of providing the vast quantities of performance data

required in any realistically acceptable time frame.

Now let us examine this short-cut method of collecting our basic numbers to see, from the viewpoint of the military scientist, just where we can come out ahead and just what we might lose. There is so much that needs to be done in this field, and such limited facilities currently available, that the honest researcher must know just what this information costs per data point (as measured in time, research facilities, and money) and whether it is really worth the cost. Once we know this, and our needs and resources, we will be in a position to determine some optimum balance in our over-all data-collection program.

Of course, we gain a tremendous amount of time by utilizing our short-cut methods. By establishing an appropriate series of quasi-combat training courses, we will be prepared to examine rather complex problems with a minimum of delay. In most cases we can obtain some of our required numbers within months of the first expressed need.

Unlike most scientific research, where the results of the efforts often form lasting foundations for pyramiding results, military research to a very great extent is dated and all too quickly becomes obsolete as weapons systems and the characteristics of war change. Thus, much of what the military researcher does has only temporary value. Knowing this, we must consider the cost of our work in the light of its often limited, in time, usefulness.

There is an adage that says you can solve 90 per cent of most problems with only 10 per cent of the work that would be required to solve 100 per cent. Considering the present state of the art of military operations research, it is all too often inefficient to spend 90 per cent of the time struggling to solve the remaining 10 per cent of a given problem. It would be much wiser to be satisfied with "broad brush" type answers in order to have timely solutions to our problems, and spend our remaining efforts on other situations that are also crying for solution. Therefore, we cannot afford to waste precious time in obtaining data that are somewhat more accurate but are useful for only a short period. We must of necessity develop short-cut methods of obtaining as rapidly as possible the data we require.

By using an established program of Symbion, we drastically conserve our research power. In perhaps no other field of endeavor is there such a shortage of trained and experienced personnel. A completed series of programs such as we have initiated at Fort Stewart would provide the military scientist with full-blown, completely equipped "laboratories in the field" which would be readily available for his needs

as they develop. These laboratories would be staffed and run by competent and experienced soldiers already acquainted with the equipment required for a quasi-combat course, and even somewhat inured to the often rigid demands of the scientist.

Quality of the data

Now for the quality of the data obtained by these short-cut methods. It is true that, since our control is not always what we would like, our numbers may not be as reliable as those obtained from the controlled field experiments. The question, then, is whether this decrease in the quality of data is small enough to be ignored when considered in the light of the analytical systems in which we would use those data. Our sole reason for obtaining these numbers is to utilize them in our examinations of future combat actions, not merely to obtain an "accurate number" for something. To be efficient, then, the uses to which we put our data should determine the degree of accuracy required, since we pay considerably for each increase in accuracy. And after all, there is really very little use in obtaining data accurate to the third decimal place when it will be rounded off to the nearest whole number before being used.

Data collected by means of Symbion can run the gamut of quality just as those obtained by any other means. In the great majority of instances, there is no significant loss of either reliability or validity in the data over those which could be obtained by other means. In many cases we are in the position of astronomers who can only record events as they happen, but are restricted in the manipulations they can perform. However, in partial compensation for our lack of rigid controls at times, we are able to utilize continuing cycles of training, thus increasing our sample size far beyond what we could expect to demand in a specifically conducted experiment. Then, too, the cyclic characteristic of the training programs (and thus a Symbion-type data-collection program) provides us with an ideal situation for "debugging" our equipment and data-collection techniques. This fact has been very helpful to us in developing our program at Fort Stewart—hindsight being so much clearer than foresight. And we must continue to bear in mind the fact that without the utilization of so-called quick-and-dirty techniques of collection, much of the data we need would never be obtainable at all with our present limited facilities.

Although there are rich rewards, these techniques can impose additional burdens on the soldier and the scientist that neither would face if they continued upon their separate ways. Often there will be confusion, both for the soldier and the scientist. Field expedients which often are demanded by battle and

which work in combat, may be intolerable in a study which is to supply "reliable data under repeatable conditions." As we have so painfully learned, a piece of equipment enthusiastically accepted by the scientist because it functions perfectly in the laboratory might be entirely out of place in the field of combat—or even on a simulated battlefield.

We know what we wanted in our ORO-Fort Stewart efforts: simply a war. Most emphatically one where all the battles are bloodless; but other than that, as realistic a war as possible, even to the use of all types of live ammunition (especially since we at ORO are interested in measuring their effects). Fort Stewart wanted this for the experience it would provide the soldiers sent there for training, ORO for the weapons systems performance data which could be obtained in no other way.

What we have done so far is only a first step. We have one target system in operation, and soon another will be ready for test. We have to some degree codified the basic methods by which we can utilize effectively the man-hours, equipment, and ammunition allotted to appropriate phases of the Army Training Program and still obtain satisfactory performance data. Further joint efforts by the soldier and the scientist on the development of additional target-data-collection systems, combined with some of the excellent programs mentioned by Lieutenant Colonel Robert B. Rigg in his *Realistic Combat Training and How to Conduct it*, could provide us with the field courses we need.

Symbion an effective tool

Symbion, then, is an additional tool developed for the military researcher to supplement the all too meager flow of input parameters. It can provide us with broad-brush type answers to a multitude of questions; and for many questions this is the only type of answer required by the situation, especially when viewed from the standpoint of efficiency of use and the law of diminishing returns. There are many fields, of course, that can be examined only by conducting large-scale, specifically designed and conducted experiments. On the other hand, there are many problems that can be examined to an "efficiently adequate" degree by means of Symbion-type studies, and many preliminary examinations of problems in the earlier category can best be accomplished by means of Symbion's methods.

From our experience at Fort Stewart, we at ORO now feel that Symbion can be put into effective use at a few other posts. If this is done, not only will the soldier benefit from his extra efforts, but the military researcher will greatly increase the sources of his urgently needed basic data.

The War of Basic Research

Brigadier General ALDEN K. SIBLEY and WILLIAM H. McNEICE

The world's leader in technology, the United States runs the grave risk of becoming a second-class power because of a failure to put proper emphasis on pure scientific research. Too long dependent on European brainpower, we must take steps to develop our own. To fail to do so could cost us our survival as a nation.

THE undoing of the United States may be its superb technological know-how. The pyramid of this know-how can rise no higher than the foundation of basic science on which it rests and it can be cogently argued that we are so wasteful of our resources, so careless of the future, and so niggardly of the support we give pure research that the day may come when our vaunted ability to make many things in huge amounts may shrivel from a lack of basic scientific knowledge.

For the purpose of this discussion, and well realizing that the line between science and technology is often narrow to the point of being indefinable, science is taken to mean what is generally called fundamental research: the free, uncharted probing into the unknown in pursuit of truth; the accumulation of knowledge for the sake of knowledge and the satisfaction of curiosity; the discovery of the basic scientific truth from which technology springs. Technology, on the other hand, is taken as applied science, developmental or goal-oriented research, engineering; the systematic use of primary scientific knowledge for a purpose.

Although the world's leaders in technology, our contributions to pure science have not been impressive.

We have long depended upon Europe for much of our basic research. As should be well known by now, the research which led to development of the first atomic bomb illustrates our dependence on the rich scientific heritage of Europe. In the great stream of scientific discoveries made in many lands that were prerequisite to production of a nuclear chain reaction were those of Henri Becquerel, a Frenchman, who first discovered the phenomenon of radioactivity; Niels Bohr, a Dane, and the Bohr model of the atom; Louis de Broglie, a Frenchman, the founder of modern wave mechanics; and Werner Heisenberg, a German, with his elaborate matrix mechanics; Albert Einstein, a German, and the mass-energy relationship; Max Planck, a German, and the quantum theory; Pierre and Marie Curie in France and their researches in radium; Lord Rutherford, in England, and the identification of alpha, beta and gamma rays; Robert Millikan, an American, and his classic oil-drop experiment with which he measured the charge on a single electron; F. W. Aston, an Englishman, who developed the Wilson Cloud Chamber for observing the tracks of high speed particles; P. M. S. Blackett, an Englishman, who photographed the first artificial transmutation of an element; Sir James Chadwick, an Englishman, who proved the existence of the neutron; and finally Lise Meitner and Otto Hahn of Germany, who succeeded in splitting an atom of uranium, thus producing the first nuclear fission.

From this point the making of a nuclear bomb was largely a technological problem, a now familiar story. Arthur Compton and Enrico Fermi built the first chain

reacting nuclear pile in a squash court under the stadium at the University of Chicago, and with Leslie Groves and others at Oak Ridge, Los Alamos and Hanford, made the bomb.

Structure over design

Although this list of pure scientists who contributed to the development of nuclear fission is far from complete, it is, unfortunately, typical. Nuclear energy is far more a product of European than American brainpower. It is no mere whim of the European that has led him so often to characterize America as a nation of gadgeteers. Americans tend to honor structure over design, the gadget more than the theory. Ingenuity born of necessity has led us inevitably to become a nation of gadgeteers. Like the Romans, we love to build things. We are the greatest skyscraper, road and bridge builders that the world has ever known. Today we continue this tradition, we build and produce empirically.

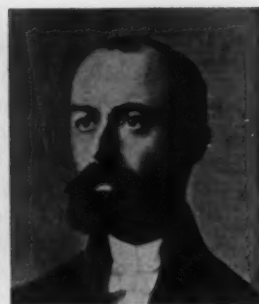
There are reasons for the American penchant for gadgeteering, of course, many of them fairly obvious. We have had at our disposal a vast geographic expanse containing an enormous wealth of natural resources. After three hundred years, great areas of our country still remain sparsely populated. We have always had room to move, resources to draw on; we have always been faced with the challenge to build—the challenge of engineering. We have been the fortunate inheritors of that pragmatic spirit which brought the Pilgrims to our country and sent the pioneers across the Western Plains, relying on their common sense and ingenuity to cut a living from the raw and rugged continent they had chosen.

Lack of interest on the part of Americans in purely theoretical work has been widely discussed. Alexis de Tocqueville, one of the most incisive of European commentators on American society, analyzed this lack of interest in 1840 in his *De la démocratie en Amérique*. Much of the sting of truth in his observations remains after more than 100 years. Yet in the age of slow neutrons, radioisotopes, and nuclear fission, the nation which excels in pure science may well control the world.

The ultimate aridity of overemphasized developmental research is progressively becoming more widely recognized. It is a truism that the thinking of men is largely controlled by the past, and that closely directed goal-oriented research more often than not evolves within traditional patterns and seldom contributes to man's store of basic scientific knowledge. If, for example, Heinrich Hertz had been asked to devote his energies to producing a device for communicating over long distances without wires, he would probably have turned to semaphore and telescopes, or light signals, or other application of conventional principles. But because he was not interested in practical devices, but in finding out if the waves in space predicted by Maxwell really existed, he contributed something of fundamental importance to our understanding of the universe—an in-



Sir Isaac Newton
England
The Law of Gravity



Henri Becquerel
France
Radioactivity

novation so profound that applications based upon it, including radio, radar, television, have not yet been exhausted.

As a technological by-product from pure research in crystals by Professor Charles H. Townes of Columbia University, from basic research in solid-state physics has come the "Maser" (microwave amplification by stimulated emission of radiation), a powerful interference-free amplifier now finding wide application. There is little doubt that a generously funded research program set up specifically to develop a more efficient amplifier would have produced a better amplifier; but chances are that this amplifier would have represented simply an improvement of the conventional type. It is significant also to note that Professor Townes, realizing well the critical need for stimulating basic research, has recently given his patent rights to a research foundation which will distribute among educational institutions for support of fundamental research the total income from application of the maser.

Research 10% pure

The Federal government, recognizing the urgent need for stimulating training in the United States that would produce scientists capable of making the basic advances in scientific theory which has in the past been the province of European thinkers, is now looking to the National Science Foundation to redirect scientific policy toward pure research. Yet much remains to be done. Although increasing quantities of our federal budget—more than \$5 billion a year—are poured into research and development, this is research and development of a very special kind. It is largely developmental research: applied science, technology, and engineering. Only about 10 per cent of it is pure research. We research the hell out of everything, but we contemplate very little.

In the past this has been in many ways our strength. But it can be strongly argued that we are moving into an age when respect for ideas, respect for the basic contemplation of nature and society for the simple sake of seeking truth and satisfying curiosity may be much more necessary than we have previously realized. In writing of Johannes Kepler, the sixteenth century pro-

fessor of mathematics and astronomy, Albert Einstein said, "It seems that the mind has first to construct forms independently before we can find them in things. Kepler's marvelous achievement is a particularly fine example of the truth that knowledge cannot spring from experience alone but only from the comparison of the inventions of the intellect with observed fact." The mental discipline and orientation of pure research, the education of minds capable of "inventions of the intellect," are sorely needed, and it is an area into which we have channeled a negligible amount of our research funds.

Warren Weaver, Vice President of the Rockefeller Foundation and Director of its Division of Natural Sciences and Agriculture, in an article published in *Scientific American*, has shown that in the past 25 years financial support of research and development in this country has multiplied 25 to 30 times while expenditures for basic research have multiplied only 10 times and have declined from 20 to less than 10 per cent of the national expenditure. Employment of scientists in America, which has multiplied five times in the past 25 years, has shown the greatest increase in industry where most scientists are engaged in applied research, while the number of scientists in universities today account only for some 20 per cent of the total employed. And of these university scientists, less than half are engaged in basic research—a situation which should be the cause of grave concern.

To further aggravate the problems of the universities, we see a situation where it has become increasingly necessary for professors to supplement their incomes by summer work, during a period when they should be

devoting their time to reading, thinking, and their own research.

Science in the Soviet Union

It is a telling and disturbing fact that a similar situation does not exist in Soviet Russia. For thirty years Soviet Russia has been systematically building an educational system that would give rigid technical training to a large number of scientists and engineers who, under the communist system, would be available to serve the needs of the state.

Launching of the Soviet space satellites under a crash program by the Commission on Interplanetary Communications of the Soviet Academy of Sciences is visible manifestation of the success of their accelerated program of scientific education. The fact that American satellites followed them into space in no sense diminishes the significance of the sputniks. They emphasize to the man in the street some of the facts which have gravely concerned the National Security Council in the past several years. In 1950 the United States graduated 130,000 young men and women in all scientific fields, as compared to about 70,000 graduates a year in the Soviet Union. In six years these figures were almost exactly reversed. In 1955 the number of graduates a year in the Soviet Union had reached almost 140,000, but in the United States had dropped to about half that many. This grim comparison is exaggerated by the fact that no less than 60 per cent of the Soviet graduates are engineering and science majors, fields which accounted for less than 25 per cent of the graduating class in the United States, and that probably 20 per cent of the Soviet graduates are fundamental researchers: pure physicists, mathematicians, chemists, and the like.

Hand-in-hand with the humanities

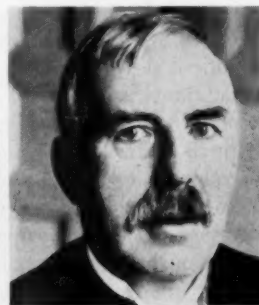
How can we within the framework of our democracy achieve a similar level of achievement without hopelessly unbalancing our system of higher education? We must recognize at the outset that it takes time for a student to become a scientist. We must not hope to compress into a single generation the broad range of work which in the end must be carried on over a number of generations to come. We certainly cannot expect

Brigadier General Alden K. Sibley became New England Division Engineer in April 1957, after serving since 1955 as Director of Educational Development on the Faculty of the National War College. Upon graduation from the U. S. Military Academy he was commissioned in the Corps of Engineers. As a Rhodes Scholar, Oxford University, he took three degrees in the field of nuclear physics. During World War II General Sibley served as district engineer, North African Engineer District, and later became Deputy Chief of Staff, Middle East Theater. Transferred to Supreme Headquarters, Allied Expeditionary Forces, London, he was later named as Chief of Staff of the SHAEF Mission to France. After the war he was assigned to the War Department General Staff. From 1952 to 1954 he was assigned to SHAPE as Chief, Logistics Plans Section.

Mr. William H. McNeice has been with the U. S. Army Engineer Division, New England, as an engineering writer and public information writer since 1955. He served four years with the U. S. Navy during and after World War II. A graduate of Boston University, he holds an M.A. degree from the University of Pittsburgh and is a former teaching fellow and instructor at Boston University.



Pierre and Marie Curie
France
Radium



Ernest Rutherford
England
Nature of the Atom

a "crash" program in scientific education at all levels to bear fruit with the first graduating class. We must be careful also not to sacrifice other essential subjects of liberal education on the altar of science. It would be well in this respect to remember that throughout history great advances in fundamental knowledge in science have gone hand in hand with glorious periods in art and literature.

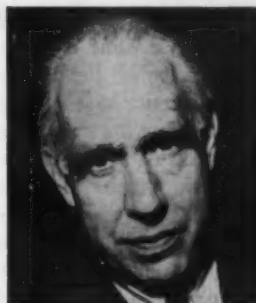
A beginning, however, must be made. President Eisenhower, in summarizing Soviet achievements at the secondary school level, has said: "One thing that money cannot buy is time. Frequently time is more valuable coin than is money. It takes time for a tree to grow, for an idea to become an accomplishment, for a student to become a scientist. Time is a big factor in two longer term problems, strengthening our scientific education and our basic research. . . . Young people now in colleges must be equipped to live in the age of intercontinental ballistic missiles. However, what will then be needed is not just engineers and scientists but people who will keep their heads, and in every field, leaders who can meet intricate human problems with wisdom and courage. In short, we shall need not only Einsteins but Washingtons and Emersons." This poses a formidable challenge to American educators today on both the secondary and university levels. Some idea of the size of the job can be grasped when we compare the accomplishments of the average American high school student with that of the Russian high school graduate. The Secretary of Health, Education and Welfare in a memorandum to the President on the subject of school aid, pointed out that only one out of three of our high school graduates has had one year of chemistry, only one out of four has studied a year of physics, and only one out of three has had more than one year of algebra. With education more important to long-term national security than ever before, the efforts and aims of educators and students alike must change fundamentally.

Perhaps the Soviets are wrong in such a concentration of national effort in science. If they are wrong they will have an overabundance of scientists. If we are wrong in developing too few scientists and high quality engineers, it may cost us our survival as a nation. It is hard to avoid the conclusion that the Federal government, industry, private foundations and each of us as individuals must come squarely to grips with this problem.

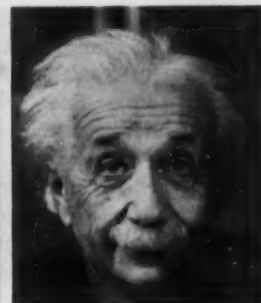
. . . the Federal government acts

We believe the Federal government has in the past two years shown a remarkable record of progress in facing the challenge of achieving high quality secondary, undergraduate, and graduate education and in broadening the base of pure scientific research in the United States. Let's look for a moment at some of the high-lights of that record.

Appointment of a Special Assistant for science and technology to the President and the establishment of



Niels Bohr
Denmark
Atomic Structure



Albert Einstein
German-American
Relativity

the Science Advisory Committee reflects the mounting concern for the state of science in this country and signifies a new national awareness that the hope for our survival as a free and prosperous nation rests in large measure upon the quality of our education and upon our capacity for scientific research.

Funds for the National Science Foundation increased from \$50 million in fiscal 1958 to \$136 million in fiscal 1959, thereby enabling it to provide more support of basic research and to expand its program for science-teacher training and other efforts to improve the quality of science education.

The Department of Defense Reorganization Act created the new office of Director of Research and Engineering to supervise the defense research and development program. The Department of Defense also brought into operation the Advanced Research Projects Agency. In August and September of 1958 ARPA scientists successfully carried out one of the most imaginative and valuable experiments ever devised in the study of space when they exploded three small fission bombs 300 miles above the South Atlantic and produced a temporary belt of electrons around the earth. We saw also the establishment of the National Aeronautics and Space Administration and Council, and reestablishment of the Science Adviser in the State Department. And newly established in Congress are the important Senate and House Committees on Science and Astronautics. From the House Committee is expected soon an important bill, reflecting an idea first suggested by Wernher Von Braun. This is the so-called "tithe" bill which would require a 10 per cent increase of every research and development contract awarded by the federal government, this amount to be devoted to basic research in the field to which the contract is directed.

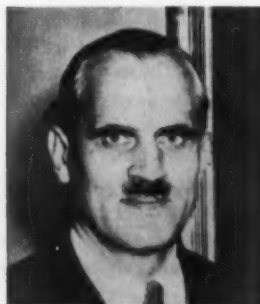
Taken together these organizational changes and activities reflect a greatly increased sense of urgency by the federal government in support of science, a sense of urgency that must, in order to be effective, evoke a corresponding sense of urgency and responsibility throughout the nation.

Then came the important provisions of the National Defense Education Act of 1958 representing a total investment of \$1.07 billion over a period of seven years.

We should not for a moment think that anything more than a beginning has been made. The basic responsibility for educating America's youth lies in our schools and universities, where we must look for the imagination and wisdom that will secure the maximum benefit to science. It is in our universities where individuals of high intelligence must seek the climate that favors the creative process. And the task facing the universities today in fulfilling their foremost obligation—education of the student—is a great one; for it is here that we must bridge the serious gap between the level of achievement in the average American secondary school on the one hand and the intellectual level of our top graduate professional schools on the other, and this gap must be bridged in a mere four years of undergraduate study. Thus a nationwide effort must be made to provide in our secondary schools that vigorous training that is expected of every candidate for admission to a first class European or Russian technical institute or university. Then, perhaps, our universities may one day see an entering freshman who will not expect education by spoon feeding, who will realize that he is his own teacher, and will thereby allow the university to fulfill its true function; that of inspiring him, of counseling and directing his studies, of providing him library and laboratory, and affording him the great benefits of intimate association with first class minds.

The search for incentives

The universities, however, cannot do the job alone, nor should we think for a moment that with the advent of federal aid we no longer need the support of industry, private foundations and individuals. Such support is needed as never before. The federal government can do no more than prime the pump and show the way. The continuing impetus which alone can produce the mathematicians, physicists, political scientists and statesmen America must have, can only come from our colleges and universities with the full support of business and industry. We can no longer afford the luxury of spending less than one per cent of our gross national product for education. We must be willing to spend more to educate our youth than we spend for cigarettes.



Arthur Compton
American
Atomic Research



Edward Teller
Hungarian-American
Hydrogen Bomb

Not only must we support our educational institutions directly, but we must somehow supply the incentive to the young scientist to make a rewarding future in the laboratories of fundamental research. Unfortunately, in the United States economic success is seldom a laboratory by-product. We support projects but not men. Tragically in our country the road to economic success leads not through the laboratory. A mathematician to be economically successful by American standards must forget mathematics and learn to sell soap. Against this kind of pernicious and fatal anti-intellectualism that relegates those engaged in intellectual pursuits to the bottom rung of the economic ladder we must never cease to fight. We Americans must realize that the time for educational dilettantism—for poor and underpaid teachers and the tendency of a student to just "get by" in order to play football—has long passed. We must learn to think and think hard if we are to escape the fate of the Roman Empire. We are the richest nation in the world. We have the highest standard of living in the world. We cannot afford to allow ourselves to go soft. We must have the courage and the intestinal fortitude to pay the annual premiums on our national insurance policy with adequate military stature and adequate scientific and technological brainpower.

The foremost question of brainpower

Thus, it seems every aspect of the problem brings us back in the end to the question of brainpower, and from this overriding requirement our military leaders are certainly not exempt. The weapons systems of the modern age have already become so highly involved technically that even minor tactical units—infantry company and the artillery battery—require scientists on their staffs. The professional military commander at any echelon can no longer sit back, complacent in his leadership and command ability, leaving the difficult technical questions to the scientific "long hair." In the age of modern weaponry any commander who fails to know his weapons and to study with diligence the complex problems of weapon effects will progressively abdicate command to those who do.

Just as we would urge upon our colleagues in uniform the importance of becoming military scientists as well as commanders and leaders of men, so we would call upon our captains of industry and our great educational leaders in whom America has such a rich heritage to grasp the nettle of their grave responsibilities for our survival in the nuclear age. We must find the way to remove this Achilles heel in our security structure before it is too late. Until we make it possible for the educator, for the mathematician in his study, and the physicist in his laboratory, to aspire to the material recognition we give to the chairmen of our boards and the presidents of our corporations, the ablest and best will desert the study and the laboratory for new worlds to conquer and for those very material awards on which our society has come to place so high a premium.

THE LIFE OF STAFF

Col. EBEN F. SWIFT



I WOULD like to correct a few misconceptions about staff work and to promote a better understanding of staff officers. I know there are misconceptions about both the work and the people who do it.

Before I accumulated more than six years of experience on high staffs, I had just about every false notion that could be formed. My experience was not acquired voluntarily; some of it came against my strenuous objection. I don't recommend my original attitude. I do say that anyone having such an outlook should be quicker about changing it. Maintaining an attitude like mine will help neither your peace of mind nor your career.

Colonel Eben F. Swift, Infantry, enlisted in 1933 and graduated from West Point in 1940. He commanded a battalion of the 27th Infantry (Wolfhounds) in the Pacific and served on division and higher staffs during the war, and later on the staffs of EUCOM and Seventh Army. After a tour with JUSMAG, Thailand, Colonel Swift is now on the staff of Fifth Army. An occasional contributor, his latest article was "Basic Training Isn't Simple" (November 1958).

Let's face it: we who were fortunate enough to have commands in wartime are getting older all the time. Command jobs are getting fewer, but there are relatively more and more staff jobs for us poor souls. If you depend on your record as a commander, as I did, and say "To hell with this staff stuff, leave it to the cookie-pushers," you're going to end up behind the 8-ball. It's another example, and a classic one, of if-you-can't-lick-'em-join-'em. I hope what I say will convince some misguided souls they'd better join 'em fast. I am converted now, but let me tell you why it took so long.

When I returned from overseas in 1946 I thought I had fought a pretty tough war. Who didn't? Not so tough a war as several of my contemporaries had fought, but I was sure mine had been a lot tougher than that of most of my associates on the staff to which I was assigned at the time. I was probably right about that in some ways, except that I didn't realize then that staff work has its own particular brand of toughness. I am afraid I had the attitude, prevalent those days among "combat men," that anyone above battalion

headquarters was rear echelon and somehow had no real appreciation of or sympathy for the troubles of the front-line soldier. I should have known better. I am sure there were plenty of front-line soldiers who had the same delusion about *my* battalion headquarters and probably had some doubts about whether *I* was a front-line soldier, though I certainly thought I was. Anyway, my opinion then of "professional" staff officers was low, and I probably had a poorer appreciation of their troubles than they had of mine.

Mistaken notions about staffs

These were not my only mistaken notions about staff jobs. I had the quaint suspicion that staff officers didn't really work very hard; if they did, it was because they cooked up work only to justify their jobs. Even today, quite often we hear of some rough, tough field soldier deploring the fact that too many officers seek soft, cushy staff jobs in order to dodge the rigors and responsibilities of troop duty. If there are such staff jobs I would like to know where they are. I might be tempted to do a little seeking myself. In my experience, someone has been seeking *me* for staff jobs, and I haven't had a soft and plushy one yet.

Maybe there are officers who prefer staff duty to command, but I think there are few who prefer it because they think staff work is easy. Some people seem to have more aptitude for it than others, and perhaps it is easier for them than it is for me. For me, staff work is not easy. Some time ago an article appeared in these pages to the effect that everybody wants on a staff. I don't know who "everybody" is, and I don't know their motives. But if they are looking for a soft touch somewhere I am afraid they may have a sad awakening.

What about the charge that staff officers manufacture work so as to justify their jobs? Once I had a solution for this. I would cut down the paper shuffling in my branch by taking the direct approach: simply not write so many papers. I found that it was not so easy as it seemed to apply my sound principle in my section. Higher headquarters wanted answers; subordinate headquarters needed guidance. Of course, it is well known among staff officers that the only people more stupid than those in the next subordinate headquarters are those in the next higher. It is well to keep in mind, however, that this saying is applied to *your* headquarters by all others up and down the line.

Actually, a considerable portion of every staff officer's time and effort is spent in trying to simplify, clarify, and fix responsibility, so as to reduce the load of unnecessary paperwork involved in replying to requests for clarification, additional information, and who does what and when. After all, when that paper comes to you for action and bears a short suspense date, you are not going to waste time asking if it is necessary, particularly if it comes from a higher headquarters. You just write that paper. It would be fine if the army commander could pick up a voice radio and broadcast to his commanders such things as the army training

directive, with annexes, or the operating program for the next fiscal year. Then his paperwork load could certainly be reduced, and he would not need much of a staff to write for him. Until that time comes, however—and I think it never will—some staff officers will be needed to convert these projects to writing in a few thousand well-chosen words. That is what caused me, over a period of time, to revise my notion that staff officers manufacture work in order to justify their spaces. If they do, they must do it in headquarters where I have not served.

Do they enjoy it?

Field soldiers, including me when I was one, criticize the staff for living too well in the field. My remarks were good-natured, and were confined to a few friends I knew would not take offense, but I have heard more scathing criticism. No one denies that there was a difference between the bare comforts available to a company commander and those enjoyed by a staff officer of equivalent rank under combat conditions of World War II and Korea. Also, it would be hypocritical to assert that these two officers generally lived under equally dangerous conditions. However, it is hardly fair to criticize anyone for living no more uncomfortably or no more dangerously than necessary to get his job done. It seems probable, though, that the differences between the relative comfort and safety of staff officers and combat commanders will be considerably reduced in an atomic war. Surely, living in



ARMY

the rear areas will be more hazardous than ever before. As for conditions, staff officers may still be considered to live more comfortably—if you can call living on top of a volcano comfortable—but I doubt that they will enjoy it.

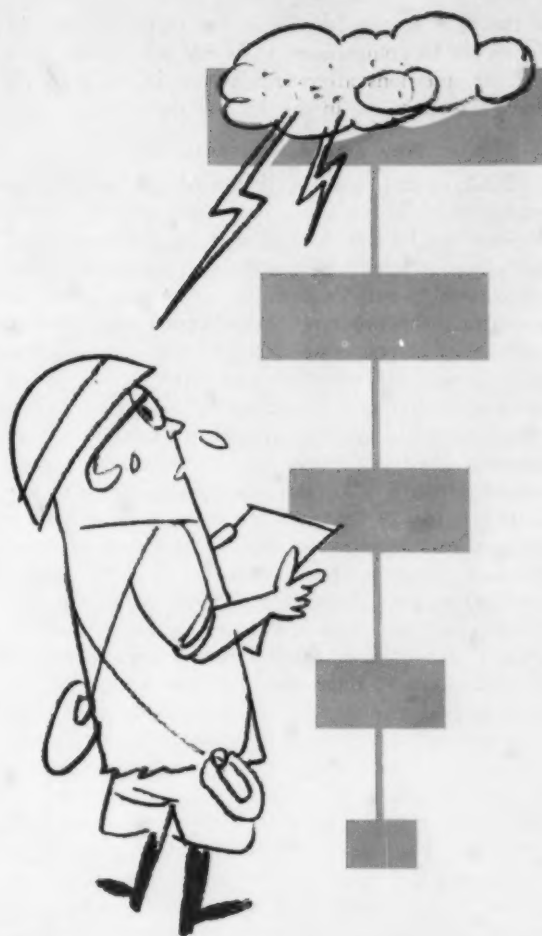
When I was assigned to an operational army staff overseas it upset my preconceived notions of how well a staff lived in the field. As a battalion commander I had had my share of sleeping in foxholes and in pup-tents and of shaving out of steel helmets with cold water. However, during those times, usually the fox-hole was dug for me, the pup-tent was pitched, and when possible the water was heated, as was a can of delicious C-rations. This was done not because I demanded it, but because the better you take care of the Old Man, and the higher his morale, the better he can do his job, take care of his troops, and do what he can to raise their esprit. This principle seemed somewhat undemocratic in some circles after World War II, but it has always made pretty good sense to me.

Anyway, when our army staff went into the field—and we did so frequently on alerts and field exercises—field-grade officers, including me, pitched their own tents, waited in chow lines, and heated their own shaving water. This too made sense, because if the few enlisted men, mostly senior noncommissioned officers, assigned to the headquarters did those things, they would be doing nothing else and would have no time to get *their* jobs done. I do not mean that I objected to going in the field as a staff officer because it was beneath my dignity to have to take care of myself. We all looked forward to those alerts and exercises as a relief from suspense dates and long hours behind the desk. Nevertheless, it was a far cry from the old popular impression, which to a degree exists, of the arrogant staff officer, his uniform immaculate, his boots highly polished (by his orderly, of course), imperiously dictating his commander's orders to the unfortunate, grimy, distraught field commander, or casually reclining in the back seat of his staff car while it splashes mud on footslogging troops.

A more subtle toughness

I have said that staff work has its own particular brand of toughness, but this toughness is more subtle than that experienced by combat commanders. True, the staff officer does not have the pressure of the direct responsibility for troops that the commander has. But he must recommend decisions to his commander that vitally affect the performance and operation of the unit. If he is a good staff officer he will feel the pressure of that responsibility, every bit as much as the commander does.

They say the Army is no place for individualists. Yet the most successful commanders are those who are able to impress their individuality on their units. The proudest units are those that bear the stamp of the leader's personality: Rogers' Rangers, Jackson's Foot Cavalry, Sherman's Bummers, Merrill's Marauders,



Patton's Third Army, to name a few. However, the statement is much more applicable to staff officers who must never forget that they are the commander's five senses but not necessarily his voice. They must be team players. If their individual desires, convictions, beliefs, idiosyncrasies or what-not are repressed in the process, that's just too bad. With every official word they say or write, they must not ask themselves, "Is this what I want?" but rather, "Is this what my chief, his chief, the chief of staff, and the commander want?" This is tougher on some people than it is on others. Often the Indian complains that the chief is stifling his initiative, over-supervising him and being generally inflexible. That is the Indian's excuse for his failure to adjust to the discipline of subordinating his own wishes to that of his commander. Nevertheless, the staff officer is subjected to far greater discipline of this type and closer supervision of *all* types than is the commander.

Most frustrating to a new member of a higher staff fresh from troops is the apparent difficulty of getting the job done. Why, he asks, all this endless writing and rewriting, checking on detail, coordinating, looking up references, eternal bickering about interpretation of meanings, which would make the nitpicking

of the most accomplished guardhouse lawyer look insignificant by comparison? Why not tell 'em to do it, and ask questions afterward, as we did in good old Bravo Company, or in the 1st Battalion?

Why procedure is necessary

I'll admit this business is carried too far at some headquarters, but it takes only time and an artistic chewing out by the chief of staff for the new young staff officer to learn why procedure is necessary. When instructions go out—for example, to an army command concerning thousands of troops spread over thirteen states—a lot of people are going to read those instructions. If they are not clear and comprehensive, they could mean different things to different people. Nowhere other than on an army staff is it brought to your attention more forcefully, that an order that *can* be misunderstood *will* be misunderstood. The CO of a battle group may interpret his instructions in an entirely different light, for instance, than the division ordnance officer or the comptroller. If those instructions had not been coordinated with the army ordnance officer before they were issued and not enough ammunition is available, or there is not enough money in the units to carry them out and the comptroller was not informed, the army commander looks silly. The offending staff officer is in the grease, even though he may have intended only to take a few short cuts to get quick action.

Such are the pitfalls of side-stepping proper staff procedure. The new staff officer soon learns that coordinating his work with a lot of people, *ad infinitum*, is not an attempt to diffuse responsibility. It is necessary to avoid even worse confusion later on, even though the time it takes seems interminable, and it seems the job will never be done.

We devote more effort and spend more money to maintain the morale of our troops than any other army in the world, and rightfully so. Of course, how much of this money and effort are misdirected is controversial. In so far as our discussion is concerned that is beside the point, which is that precious little concern is expressed about the morale of staff officers.

Then . . .

I suppose that by the time we get assigned to a higher staff, we should be mature enough to maintain our own morale, but when I contrast my way of living with my father's before the war, I wonder. Once he told me that had he been a millionaire, he would have lived no differently than he did as an Army officer. As a member of the most exclusive clubs he could play polo on Long Island, at Aiken, Camden, Honolulu, San Juan, or Manila. As a regimental commander in Hawaii, he had what I considered the officer's ideal life. He was an early riser by choice, not by necessity. After setting-up exercises and a leisurely breakfast, his car would take him to the office, where he would dispose of the papers his adjutant had prepared for him. Even then,

he thought the paperwork load was becoming excessive. After about an hour he would call for his horse and ride to the training area to observe the instruction. He returned at 1100 to go over his notes for officers' call at 1130. A little before or a little after noon he had lunch at his quarters. His afternoons were free, except during maneuvers or service practice (restricted to a few days each year because of lack of money) or unless there was a military ceremony. After lunch he usually read or napped. At about 1500 he played two or three hard sets of tennis, followed by a swim. In the evenings after dinner he often played bridge, read, or attended some social affair.

His life was strenuous but free from pressure. He was out of doors most of the day. He had a crack regiment that had pride, tradition, and professional skill, as evidenced by one of its batteries winning the Knox Trophy, which he presented. He had prestige which he did not take for granted but which he valued highly. He was respected by his officers and men and he in turn respected them, but he did not coddle them (nor me). He was a soldier, living a soldier's life.

What's wrong with that picture? I can see nothing wrong with it.

. . . and now!

How different is *my* life as a staff officer today!

I rise early, but not from choice. After gulping down a light breakfast I grab my brief case and catch the 0630 bus. My wife has offered to fix breakfast, but I consider she has enough to do getting kids off to school and taking care of a big house with no servants. Besides, I like those extra minutes of sleep. It takes the bus a little more than an hour to arrive at headquarters in a large city, and because of the additional traffic, it takes considerably more than an hour to get me home. I stay at the headquarters building until 1630, when again I stuff my brief case, and catch the 1640 bus. I can dispose of many of these papers during the bus ride; the rest I finish at home. In the wintertime it's dark when I leave and dark when I return. I may be able to squeeze in a little reading or TV, but no bridge or social activity.

I am sure this routine is experienced by thousands of civilian commuters all over the country, as well as by staff officers in the Pentagon or in large headquarters in metropolitan areas. My life is no harder than the average civilian's. In fact, many non-career soldiers probably aspire to just such a civilian-like life while they are serving in the Army. However, most professionals on staff duty miss the vigorous, diversified, challenging work traditionally associated with the life of a soldier. Although they may well realize that troop duty today is not the glamorous, leisurely life as it was depicted in the old days, and probably never was, their morale would be considerably increased if they could participate in some of those activities which have made military life colorful down through the ages.

It is difficult for today's soldiers to develop their



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leadership ability, their tactical proficiency, and their physical and moral courage in order to apply force selectively, when a large segment of military and scientific thought is being devoted to developing the capability of blowing up everybody and everything off the face of the earth. If this is our only military objective, of course all the traditional soldierly qualities will not be needed, and any expenditure to develop them is merely a diversion of effort. The only characteristic required of a soldier will be to attain the technical skill to operate and maintain ever more complicated and more destructive weapons. All the military qualities seem to be useless. When soldiers feel useless, their morale is bound to sink.

That feeling of ineffectiveness

This is especially true of staff officers. The papers come into the headquarters and they go out. The staff officer never hears about those that are correct, well conceived, and effective. He gets an oral or written kick in the pants for those that have errors or are not clear. He has to guess, in most cases, whether his paper accomplished anything or not. Was it necessary? How does he know? Is he contributing to the general efficiency and welfare of the Army? Again, how does he know? All these factors seem to contribute to a general feeling of ineffectiveness that militates against his morale. He must call on all his resources to preserve his belief that he is doing a worthwhile, necessary job.

Of course, today all soldiers must overcome these difficulties, but troop duty has its compensations. The staff officer seldom sees the results of his efforts; officers with troops see them first-hand every day. Other than

the successful accomplishment of a combat mission, probably the greatest morale factor in a professional soldier's life is to command a well-trained, sharp-looking, efficient outfit. The staff officer does not have this tangible source of professional satisfaction. He cannot know if he is helping to develop units of this type. He can only hope so, and maintain his morale by other means. His leaders can help him in this respect. And this leads to my final point.

Better leadership required of staff

Generally, leadership ability is not considered an essential skill of a staff officer, but this too is illusory. I would like to really go out on a limb, now, to state that in some ways better leadership ability is required of staff officers than of commanders. Chiefs of staff are in a sense commanders; they are responsible for leading large units composed of officers of diversified services, and civilians. That requires leadership ability. So does leading the various staff sections. But the skill required is of a type different from that required in leading troops.

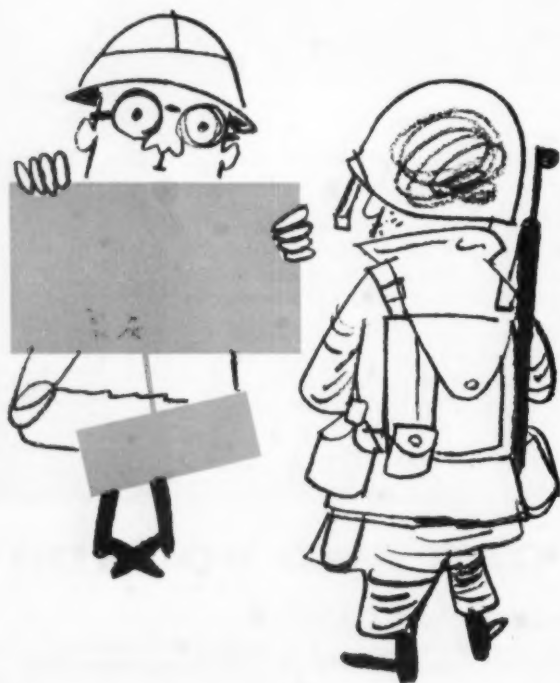
I think I can best illustrate by example. During combat a unit commander may as a last resort give a subordinate an order such as "Take that hill or don't come back!" or "If you can't get in that town by 2100, I'll find someone who can!" This method, if not used excessively, can be very effective. A good troop leader will simply clench his teeth, swear a little at you under his breath, and take the hill or town. However, if a staff officer snaps to his civilian secretary, "Type that letter correctly this time, or I'll find someone who can!" her reaction would be unpredictable, as women's usually are, but she would probably burst into tears.

What are your actions and orders at *this* time, Unit Commander?

The point is that the staff officer must apply his leadership principles to his relationship with many different types of personalities. He cannot always expect a typical, good-soldier response.

What I have said could be construed as a diatribe against troop duty in general and commanders in particular. Nothing could be farther from my intention. The necessity for maintaining the prestige, morale, and effectiveness of our troops and their commanders is undisputed. However, I think that most of us will agree that the problems of troop and command duty have been thoroughly discussed, whereas those of staff duty, equally complicated and important, have been comparatively neglected.

I hope I have convinced at least a few young officers entering staff assignments at large headquarters for the first time to forget their preconceived notions about staff work and to become adjusted to it quickly and smoothly. I also hope I have dispelled the myth of the professional staff officer as a martinet—cold, impersonal, overambitious, ruthless, self-seeking, above human emotion, with an adding-machine mind—for just what it is: a myth.





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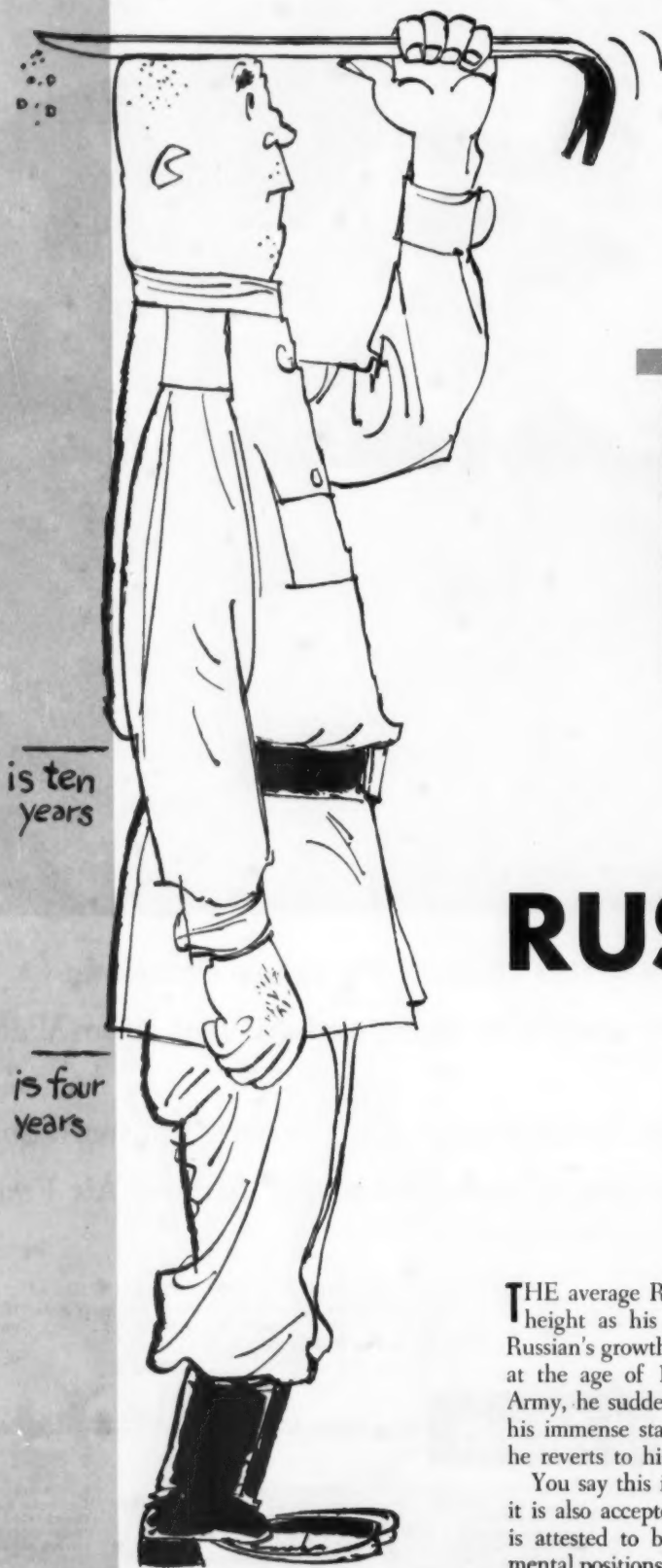
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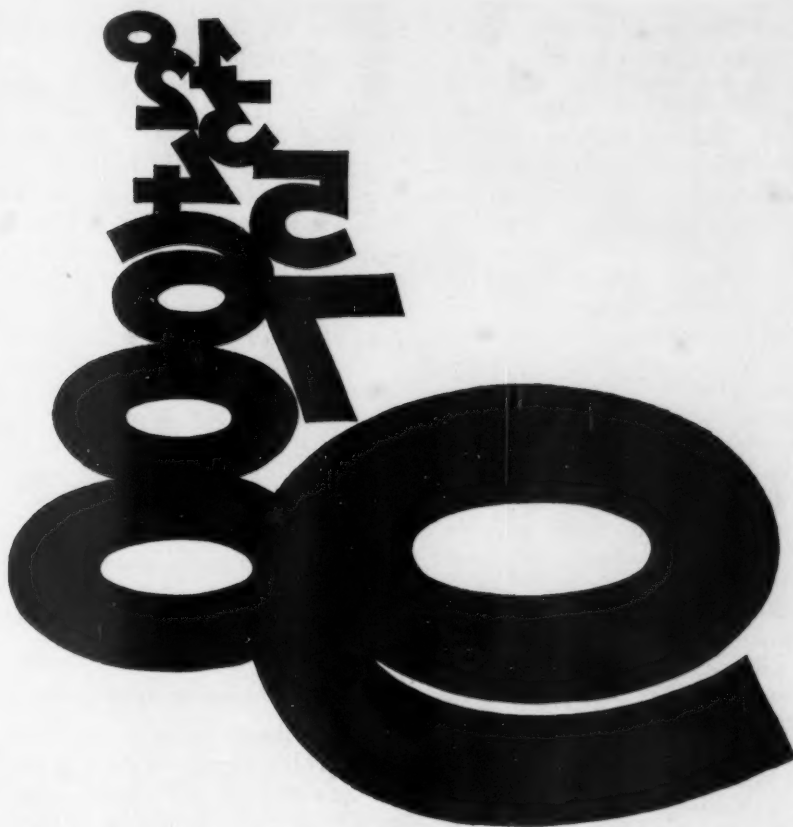


HOW TALL IS A RUSSIAN?

Lt. Col. JAMES G. MARTIN

THE average Russian civilian male is about the same height as his counterparts in other countries. The Russian's growth, however, does not progress normally: at the age of 18 or 19, when he enters the Soviet Army, he suddenly becomes eight feet tall. He retains his immense stature until he leaves the service. Then he reverts to his normal height.

You say this is most peculiar. You're right, it is; but it is also accepted by many Americans. Its acceptance is attested to by those in high military and governmental positions who subscribe to the hypothesis that the



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20 FREE-WORLD COUNTRIES

United States and its Allies cannot possibly fight a ground war against the Soviet Army.

What is the basis for this belief that the United States could not engage in a ground conflict against this eight-foot tall Soviet Colossus? A significant factor is the size of the Red Army. A recent unclassified release by the Department of the Army includes the information that the Soviet ground forces have 175 line divisions and 2.5 million men. The release also mentions other type units of combat and support nature. When compared with the limited number of divisions the United States has available, this is indeed most formidable.

However, simple arithmetic discloses that the division slice in this ground force would be a little less than 15,000. Can an effective army be supported with a division slice hardly larger than the strength of a division? If so, then the Soviets are not merely eight feet tall, but closer to ten feet. This is not to imply that the figure of 175 divisions is erroneous, but merely to suggest that units of this ground force are overrated in comparison with ground force units of the West.

Another factor that contributes to the myth of the "eight-foot" Russian soldier is the "fact" that, in case of war, the Soviets would be able to pour hordes of soldiers into battle because of their large manpower pool. Is this pool so much larger than that available to the United States? A look at the latest Russian figures seems to belie this. A recent official Soviet news release places the population at about 208 million, some 94 million of these being males. The United States has a population of about 170 million and probably a greater percentage of fit males in the military age brackets than the USSR. It is certainly true that the Red Chinese add greatly to this Communist manpower potential, but to some extent this can be balanced by the free world allies of the United States. At any rate, it is not a completely hopeless situation.

The lessons of history

Advocates of the "we cannot match the Soviets on the ground" theory also bring up the massive Soviet effort against the Germans in World War II and how, behind massed artillery, Red Army formations pushed the Germans back from Stalingrad to Berlin. This was indeed a notable accomplishment, but it was achieved at a tremendous cost in Russian lives and against a nation of 80 million that was fighting the Soviets in the East and the Allies in the West.

Can the lessons of history be ignored? It seems obvious that many people are guilty of overlooking outstanding historical events in which the colossi of the past have fared poorly against smaller but determined opposition. The mighty Persian Army was never able

to subdue the Greeks in ancient times. In 1940, the doughty Finns fought the Russians to a standstill for several months. The Germans successfully battled numerically superior Soviet forces from 1941 until their final defeat in 1945. That defeat could never have been accomplished by Stalin's "genius" or the operations of his army had they been alone in the conflict. It took the weight of \$11 billion in lend-lease supplies, and millions of Western Allied soldiers, airmen and sailors to avert a Soviet defeat.

How then is it possible for persons in responsible positions to claim that the United States, a great nation that has never been defeated in a major war, cannot fight successfully in a ground war against the Soviets? First, there are probably those who honestly believe the United States cannot contest the 175 line divisions and the 2.5-million-man Soviet Army (these persons have a large inferiority complex). Then there are those who are desirous of achieving victories without casualties. This group enthusiastically adopted "massive retaliation" as the magic formula. Korea, Indochina, and other operations have demonstrated the fallacy of sole reliance on this course of action.

Facing up to the dilemma

Massive deterrents are not applicable in many instances and could not halt the advance of enemy forces without devastation of friendly nations. Another group includes those who hesitate at the prospect of sacrifices that would be entailed if forces adequate to meet the Russian threat were maintained. In the long run, however, the consistent maintenance of a force capable of countering Soviet aggression would be cheaper than the ups and downs generated by each crisis engendered by the Communists.

The United States now appears to be facing a dilemma. It has a formidable deterrent in massive retaliation but, because of the psychosis regarding the gigantic Soviet soldier, it has failed to develop and equip ground forces adequate to counter Soviet aggression. What is the solution to this dilemma? First, it is time to stop putting the national survival eggs in the massive retaliation basket. Equally vital is the necessity to abandon completely the unsound thesis that the United States is not capable of fighting the Soviets on the ground. The manpower potential and production means are sufficient to provide and maintain a well-equipped and well-trained ground force—a deterrent that would impress on the Soviets the determination and the capability of the United States to preserve the integrity of the Free World.

The early Americans fought and sacrificed to gain and maintain independence. A little manifestation of the same courage and fortitude displayed by these early patriots would prove that many responsible persons have been viewing the Soviet "eight-foot tall" soldier through a magnifying glass. It would also show that this Soviet soldier has a mixture of clay in his feet.

Lieutenant Colonel James G. Martin, *Infantry*, enlisted in 1938, was commissioned in 1942, and integrated in the Regular Army in 1946. After a tour in the G2 Division, USAREUR, he is on duty in the Pentagon.

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THE MONTH'S CEREBRATIONS

CHOPPERS FOR TRAFFIC CONTROL

Let the MPs soar above the bottlenecks

MAJOR KEITH L. MONROE

THE ubiquitous helicopter is the best all-purpose gadget man has invented since the pocketknife, so why not use it to control military traffic?

In the highly mobile and widely dispersed army of the nuclear battlefield, traffic control operations have become tremendously important. Armored personnel carriers, tanks, land trains, trucks and self-propelled artillery are of little use to the tactical commander if they arrive late.

If not properly controlled, a corps' or a division's surface transportation, support weapons and supply vehicles can be halted by a quarter-mile defile on a main supply route. In addition, when vehicles jam a narrow road they offer a profitable nuclear target.

Military police are trained to keep traffic smooth-flowing through defiles. First, however, the bottleneck must be located and traffic-control personnel must speed to the scene of the trouble.

By allotting each military police unit one light or utility helicopter, divisions, corps and armies have the means for spotting traffic tie-ups and transporting traffic-control personnel to the point of confusion. Usually traffic at a defile, road junction or crossroads can be handled by only two men—an easy load for a chopper.

Often a bottleneck exists long before the means to break it can arrive. To approach a clogged defile by its access road is foolhardy. The vehicle carrying the personnel to relieve the difficulty soon becomes stuck in the jam and, instead of alleviating it, only adds to the confusion. The situation remains as far from improvement as the military police are from their objective.

When an objective cannot be reached by a ground route, it can usually be reached speedily and economically by air. The solution of traffic jams is a job for the provost marshal. He must

This department is designed to accommodate the short, pithy and good humored expression of ideas—radical and reactionary, new and old. We pay for all contributions published but you deserve to be put on notice that the rate of payment depends upon the originality of the subject and the quality of writing rather than length. This department is hungry for contributions, so shoot that good idea in . . . today.

have the proper transportation to reach them—in this case, a helicopter.

By adding one light or utility helicopter to a division or army aviation unit and earmarking it for military police personnel, we give the provost marshal the means to alleviate many traffic headaches. Any helicopter so added and earmarked must be controlled by him. If a machine is merely placed "on call" for "probable" use by the provost marshal, quite likely it will be on another mission when he needs it most. If the provost marshal is authorized this craft, it will be on hand.

Here is a typical situation requiring speedy action. Observation in a division's area reveals that a crashed tank is blocking traffic across a two-way bridge on the main supply route. To complicate matters, the nearest tank retriever is miles away. Near the bridge is a one-way ford which is ignored by drivers using the MSR. Consequently, traffic both ways is at a standstill. Some drivers, attempting to pass around the

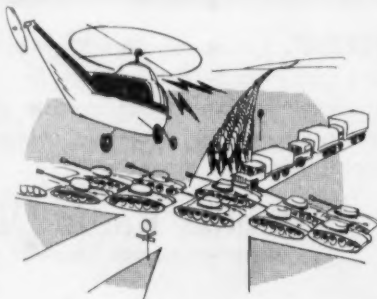
halted line, have formed another column abreast of the original one. The clogged roadway prevents a motorized military police patrol from reaching the ford and establishing a by-pass.

Here the value of a helicopter becomes obvious. Having one at his disposal, the MP operations officer could order it to transport two properly equipped and trained military policemen to the bridge site. The defile (ford) would then be placed in operation, traffic would resume, and the tank retriever be called to remove the obstacle. The defile would operate until repairs to the bridge were completed. The military policemen could be relieved by motor or by helicopter.

If a helicopter were to be detailed to army, corps and division military police units, it would not collect rust. While traffic control assignments would monopolize much of its time, these duties alone would more than justify its allotment. Those who believe a helicopter in the hands of military police would be a waste of aircraft and pilots, would do well to examine numerous other missions for which the helicopter could be used in its "spare time."

Some of these alternate missions are related to traffic control but all effectively contribute to the field army's main effort. Military police can use the helicopter to:

- Arrive quickly at the scene of serious accidents in order to administer first aid to the injured and evacuate them, control traffic, and guard classified materials which may have been involved.
- Conduct route reconnaissance—an engineer function, but often done by military police.
- Control the flow of civilians (including refugees and displaced persons) by announcing, through use of loudspeakers carried in the helicopter, proper routes to follow and locations of collecting points.
- Control the flow of stragglers, assist



GSE

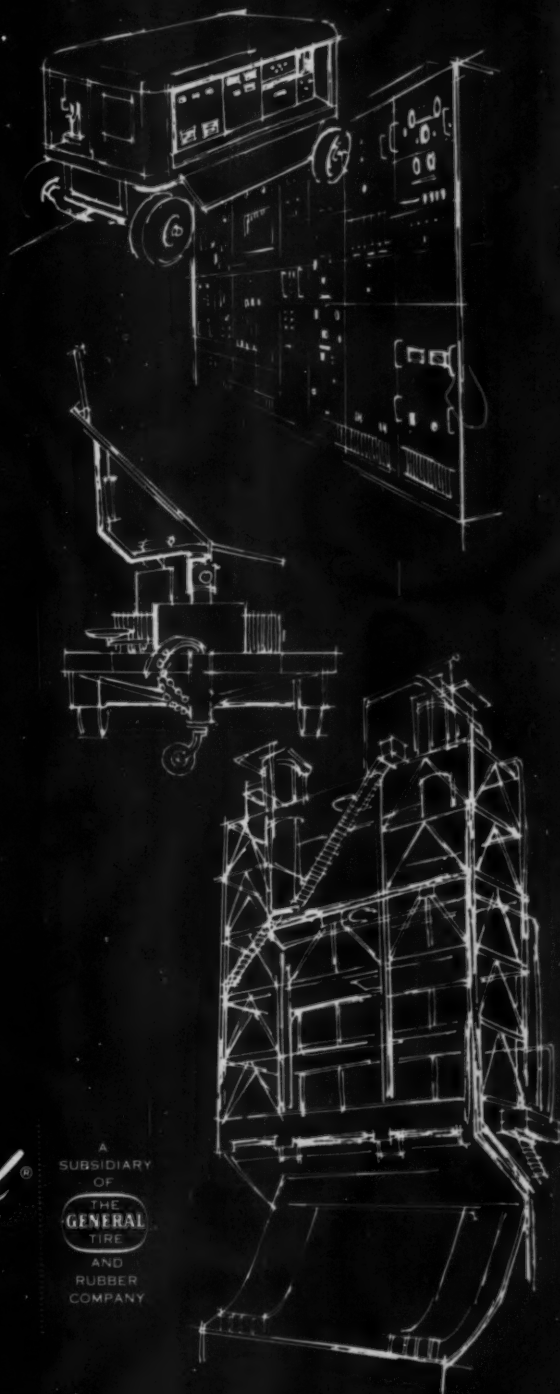
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in their apprehension, and report their locations.

- Locate and pick up escaped prisoners, both friendly and enemy.
- Rapidly transport to interrogation centers prisoners of war who possess valuable intelligence information.
- Deliver and relieve outlying traffic-control posts.
- Assist convoy commanders by providing directions, information concerning routes or recent destination and priority changes, and maintaining convoy discipline.
- Conduct security patrols over wide areas.
- Transport investigators to scenes of serious crimes.
- Patrol main supply routes and secondary roads which are beyond the capability of motor patrols. (Dispersion of a field army over a nuclear battlefield will result in increased use of secondary routes. Patrolling the network of secondary roads and trails in the army's area may be beyond the current capability of military police motor patrols. Helicopter augmentation of patrol schedules would result in better control of and communication among elements of a widespread army.)
- Provide speedy relief to military police in need of assistance.
- Observe, report, secure or apprehend

unauthorized personnel and vehicles found in restricted areas, including reporting unauthorized use of vehicles.

- Determine the workability of the traffic circulation plan.
- In riot control and civil disturbances the helicopter could be fitted with spray tanks containing irritant chemicals or used to transport riot control units to areas inaccessible by foot or vehicle. (Uses of the helicopter in operations designed to restore law and order or to protect life and property are many and varied.)
- Reduce reaction time between a nuclear explosion and the sealing off by military police of the contaminated area.

Although neither discussed nor mentioned in current manuals, the use of the helicopter is limited only by the imagination. In Korea, a quick-thinking provost marshal of the 7th Infantry Division transported two MPs to the scene of a traffic tie-up by carrying them in the litter pods attached to the sides of a modified evacuation helicopter. His prompt action allowed trained personnel to arrive at the right time and place to relieve the congestion before serious complications resulted.

Implementation of the Pentomic concept has considerably slashed the strength of divisional military police

units. Nevertheless, the provost marshal's responsibilities remain generally the same. (Actually, they have increased because of the implications of nuclear warfare.) Until he is given additional men and equipment to satisfy the requirements of his deduced missions, interim adjustments are necessary.

One such adjustment, which should remain even after personnel requirements are satisfied, is the addition to division and army aviation units of an MP helicopter with pilot and maintenance personnel. With one at hand, the MP will be able to effectively perform missions that he can't do now at all.

A highly mobile army must have a flexible and efficient traffic circulation plan. The military police who are responsible for implementing that plan must be as mobile and flexible, if not more so, as the units operating under it. To keep pace, the military police need a helicopter.

Major Keith L. Monroe, Military Police Corps, has served in the Artillery and Infantry. Since 1948 he has commanded several MP units and served on the staffs of EUSAK and USAREUR. He is a student in the Nuclear Weapons Employment Course at Fort Leavenworth.

HOW MEASURE MOBILITY?

Our present mobility index is inadequate for the task

LT. COL. KARL H. ZORNIG

OUR current approach to overcoming our disparity in manpower is through greatly increasing the firepower, communications, and mobility of tactical units. Much effort is being devoted to these improvements. As for mobility, a quick-profit project would be to find a yardstick or scale for measuring the relative mobility of Army units.

Webster defines *mobile* as "capable of being readily moved about." Applied to military units, the Army defines it as being able to move "without considerable difficulty." Most TOE apply a percentage figure to units, whereby those that are completely mobile contain "sufficient organic transportation to move the authorized personnel and equipment of the unit at one time." No rapid, universal means now exists by which the total elapsed

time can be measured for a unit to close shop at X and open again at Y.

To be "readily" moved about, units must possess a measurable readiness to move. A unit does not perform its mission while preparing to move; it seldom is productive while moving; and it does not function during the time it takes to set up after arriving at the new location. For example, artillery units support no one while they are preparing their weapons for travel, converging on their initial points, traveling, dispersing, and surveying in at new sites. Supply units make no issues while loading or unloading. Maintenance units are more "ready" when their parts and tools are van-mounted.

The relative speeds of tracked, wheeled and air-transported "completely mobile" units are significant in expressing mobility. The completely mobile tank outfit moving at from three to 15 miles an hour does not have the

mobility of an air amphibious task force traveling between 60 and 150.

The vulnerability of units on the nuclear battlefield introduces convergence and dispersion lead times as major factors in operations planners' considerations. To keep to the minimum the periods during which troops are massed, commanders must have all-inclusive knowledge of the time required for each phase of a unit's displacement cycle.

The suitability of displacement orders for units in predicted fallout zones is based largely on the readiness and speed with which a unit can move.

Commanders must be concerned with the total non-productive time which results from their tactically displacing combat, combat support, and logistical direct support units. Both combat support and logistical direct support units require a mobility equal to, if not greater than, that of the

Air brake for a spaceliner



The earth's atmosphere, one of the biggest obstacles to getting into outer space, can be one of our biggest assets coming back. At Douglas we are investigating how we can use its braking effects on rockets returning from deep space trips at far faster than ICBM speeds. Success will allow us to increase payloads by reducing the weight of soft landing systems. This technique also will aid us in pinpointing landing areas. Current reports show real progress. Douglas is engaged in intensive research on every aspect of space planning, from environmental conditions on other planets to the destroyer-sized space ships necessary to get there. The wide experience of Douglas in producing large aircraft and rocket systems has provided the company with unmatched capabilities in the missile and space fields.

Arthur Shef, Chief, Advanced Design Section, Missiles and Space Systems, irons out a problem with Arthur E. Raymond, **DOUGLAS** Senior Engineering Vice President of

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OCTOBER 1959

81

units they are supporting. A comparable relationship is required between general support units and their parent unit.

The mobility demands of units executing established doctrine must be designed into TOE and their true values must be known to and measurable by operations planners and commanders.

It is apparent that four elements must be included in any formula for expressing mobility: preparation for departure, number of shuttles, speed during transit, and preparation for operation. The solutions to various command problems are affected by different combinations of these elements.

An ideal numerical scale to cover all these elements would include eight digits: preparation for departure, one (hours); shuttles, three (per cent); speed, three; and setting up at destination, one. Such a scale might be suited to certain staff sections at higher headquarters for precise calculations, but it does not seem acceptable for lower units.

A more practical measure of mobility appears to be a three-digit yardstick. With an arbitrary definition of a basic number, the variations are adaptable to practical, fast usage.

One method of arriving at a solution is to arbitrarily fix 100 as the mobility index of the least mobile unit which can move itself in one lift on the battlefield. For example, one hour to prepare to move, five miles an hour in transit, and one hour to set up, appear to be reasonable minimum standards for these variables. Thus the formula will produce indexes of less than 100 when shuttles are required and greater than 100 when these minimum standards are exceeded. Field testing of units may produce more valid basic standards.

Regardless of which basic standards are adopted, the formula by which the mobility index of each type unit is obtained is relatively simple. The variables are properly weighed therein to produce realistic indexes for all units within the practical ranges of each variable. The use of these mobility indexes to determine reliable time or dis-

tance figures for any type of unit is also surprisingly simple.

Heretofore, a field operator had to make laborious calculations, using untested variables in each case. With established mobility indexes, he will be able to determine reliable times or distances from a simple slide rule, or a plain plastic-enclosed table or chart.

With such a system, mobility indexes become useful tools for the tactical commander in reducing the vulnerability of his troops, for increasing the utilization of his resources, and for more precisely coordinating the massing and dispersing of his firepower.

Can we do all these things with our present mobility index? Well?

Lieutenant Colonel Karl H. Zornig, Transportation Corps, is on the staff of the Army Logistics Management Center at Fort Lee. His interest in mobility resulted from his Army aviation duties, command of the first helicopter battalion in Korea, and his tour as Transportation Officer of the 1st Infantry Division, described in his article in the March 1959 issue.

DEPROVEMENT

Instead of bigger and better maybe we ought to go for stuff that's smaller and worse

COL. LOUIS GERSHENOW

"Deprovement" is not in the dictionary. It's a word I've coined which (to follow official style) I can best define as: "A decrease in value or in excellence of quality of the components of articles of equipment to the extent that the articles themselves will possess the cheapest workable and minimum quality components which will insure normal operations or use of the articles concerned during their expected life on the battlefield." We might include in the definition the deletion of entire components. In plain English, why buy an expensive gadget when a cheap one will do?

During tests of 100 missiles of one type, it was found that after each trial (which, of course, resulted in the destruction of the missile), a rather costly, complicated valve survived. This indicated that the valve was sturdier than required to successfully fire the missile. That valve is now going through a "deprovement" program, to bring its

durability in line with that of the other components. This, in turn, will reduce the over-all cost of the missile.

Are we not pricing ourselves out of our profession by insisting that equipment developed for today and for the future must include the finest of metals, complicated gauges, automatic devices, fordability, and even air-conditioning? What is the average combat life of our major articles of equipment? Should not our development of equipment be based on the combat life of this equipment? Why must our fighting tools be so finely machined to a tolerance that is not required, and painted and nicely polished to the point where the soldier in combat proceeds to slap mud all over it to make it appear what it isn't?

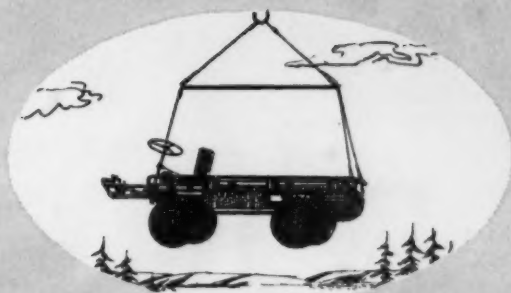
Must trucks be made of steel from bumper to bumper? Why an expensive aircraft for observation when one can be produced from other materials that cost approximately one-third of the metal in the craft? How long does today's observation aircraft remain in the air at any one time, that it requires

the comfort features and other gadgets built in? We are told that the Russians, on the basis of cost, produce three tanks to our one. Why complicate our tanks with automatic transmissions, position locators and the like? These are but a few of the many examples where deprovement might begin.

Many of the luxuries built into our equipment are supposed to increase the efficiency of the operator. Isn't it possible that we have reached the point of diminishing return in providing comfort? Wouldn't we do better to build our equipment for combat? In battle we care less about comforts than we do about protecting our own lives and destroying the enemy.

Should we not subject our Research and Development program to one of Research and Deprovement?

Colonel Louis Gershenow, Infantry, commanded a battalion in World War II and was G3 of XI Corps in Korea. He is now Executive Officer, Combat Developments Section, USCONARC.



ECOLOGY OF LIGHT HELICOPTERS

Bionomics is another word for it — how one of anything gets along in its environment. At Hiller it's the continuous research and engineering for the light utility helicopter that can master any environment. Three traits receive the most attention — payload, durability in the field, and transportability. Though interdependent, Hiller applies to each a maximum in operational studies, economic evaluation and engineering refinement. And not just in the laboratory nor in theory; the operational lifespan of every Hiller helicopter in the field is an experience to improve the line. For future generations of light utility helicopters, Hiller's studies will be far reaching.

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Irons in the Fire

Army Unveils "Flying Duck"

The Army has unveiled its latest concept in mobility, the "Flying Duck," which floats like a boat and flies above the water at speeds approaching 50 mph—about eight times as fast as its World War II counterpart, the DUKW amphibious truck. The new vehicle, developed by the Lycoming Division of Avco Corporation for Army Ordnance, employs an 860 hp gas turbine engine in combination with aerodynamically shaped hydrofoil wings, two forward and one aft. When the "Flying Duck" attains a water speed of five miles per hour, the water pressure above the submerged hydrofoils is reduced in relationship to the pressure below, thus giving lift in the same manner as does air flowing past an airplane wing. At 13 mph, the vehicle is raised well out of the water and at full flight condition the hull is more than four feet above the surface (thus eliminating more than 60 per cent of the drag normally associated with boats). The 26,000-pound "Flying Duck" can operate at top speeds over rough water for about five hours.

Boost For An Astronaut

Eight Redstone-type missile boosters, to be used in the advanced stages of Project Mercury, will be provided to the Army Ballistic Missile Agency by Chrysler Corporation. Present plans of the National Aeronautics and Space Administration, which is sponsoring the effort to put an American into orbit in outer space, call for using the Redstone boosters as power units on manned trainer capsules which will carry the spaceman to an altitude of more than 100 miles. These flights will provide a period of weightlessness of about five minutes and test the spaceman's reaction under gravity-free conditions. Redstone was selected because of its reliability: it has been successfully launched more than 50 times—a record unmatched by any other ballistic missile in the Western world.



Flying duck. Each of the twin forward hydrofoils (above) measures about nine feet, weighs about 600 pounds. In conventional operation (below), hydrofoils submerged, the craft travels up to 10 mph.



In full flight—50 mph—the craft travels four feet above the water.



New Fire-Fighting Agent

A new chemical compound, said to be twice as effective as any other extinguishing agent against liquid fuel and electrical fires, has been adopted for emergency use at Army installations. The compound, called "monobromotrifluoromethane," also can be used to prevent fires by mixing it with helium or nitrogen, thus creating a combustion-free atmosphere where dangerous jobs can be done in safety. The compound, developed by the Army Engineer Research and Development Laboratories at Fort Belvoir, can be



Silence deep as death

● "There was silence deep as death, and the boldest held his breath, for a time," Thomas Campbell was describing the Battle of the Baltic, in 1801. But many a submariner will recognize the moment in modern underwater combat, when complete silence is the only way to survival.

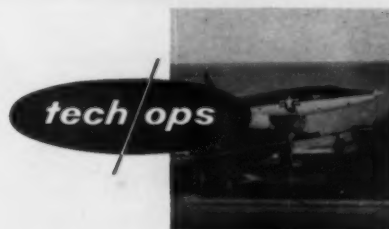
Modern submarines make the problem of silence tougher, for in these modern boats, some machinery must always be running. This is why *tech/ops* is probing, for the Navy's Bureau of Ships, the transmission of noise through water pipe lines through structure and into the sea . . . to be picked up by enemy ears. And *tech/ops* has found *new* ways of testing for such noise . . . methods that light the way toward "silence deep as death" for our Navy's pigboats.

Another typical break-through in *tech/ops'* broad scientific research and development for business, industry and government.

Technical Operations, Incorporated

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used in temperatures as low as 65 degrees below zero and will be particularly valuable in the Arctic. Fireguard Corporation of Northbrook, Ill., has been awarded an \$800,000 contract for production of 34,000 cylinders of the compound.

Army Studies Flying Crane

Army Aviation experts at Fort Rucker currently are studying the military potential of the Sikorsky S-60 crane helicopter. The S-60, according to Sikorsky officials, "refines the vertical lift or 'flying crane' capabilities that have long been inherent in the helicopter . . . and transfers to air transportation the existing 'prime mover' concept of ground transportation." The twin-engine S-60, whose cargo-carrying capabilities range from oil drums to missiles, will later go to Fort Benning for study by the Army's Air Mobility Group, and then to Fort Bragg for evaluation by the Continental Army Command's Airborne and Electronics Board.

Universal Flight Control

What is hailed as "aviation's first universal flight control system" has been developed by the Sperry-Phoenix Company and the Army Signal Corps after more than three years of study.

This is the first in-flight photograph of the Army's DHC-4 Caribou, STOL aircraft which can accommodate 29 combat troops, has a payload capacity of up to three tons, and a maximum range of over 1,000 miles. Designed and built by De Havilland Aircraft of Canada, the Caribou is powered by two Pratt and Whitney R2000 engines.



The new system operates automatically to control any type of U. S. aircraft: helicopters, fixed wing airplanes, and drones. The new system is a combination of universal-type electronic "building blocks" which are installed in various combinations to achieve any desired degree of flight automation. The universal system, which can be produced at about half the cost of other flight control systems, makes unnecessary redesign or modification problems and costs inherent in other flight control systems which are tailored for each type of aircraft.

Aluminum Wheels for M-60

The Army's M-60 battle tank, now on order, will be equipped with forged aluminum wheels, the first application of aluminum for this purpose. The wheels, now being forged at Adrianne, Mich., by Bridgeport Brass Company, will reduce substantially the weight of the new and powerful tank which is destined to replace the 53-ton (M-48) and 60-ton (M-130) tanks. Each road wheel weighs about 80 pounds and the idler wheel about 13 pounds. After forging, the wheels are shipped to the Chrysler Tank Ordnance Plant in Center Line, Mich., for machining and rubber treading.

HOT SPARKS

A \$4.9 million contract for surveillance drone systems, which will incorporate several of the Army's latest sensory devices into an improved version of the SD-2 drone, has been awarded to Aerojet-General Corporation. Initial flight testing is set for early 1960.

♦ ♦ ♦

The Military Electronics Division of Motorola, Inc., Phoenix, Ariz., has been selected to develop the mission and traffic control system for the B-70 global bomber, a system that will enable the B-70 to be directed to a target anywhere in the world and be recalled at any time by radio. The selection of Motorola was announced by North American Aviation, Inc., B-70 weapon system contractor.

♦ ♦ ♦

Development of a plastic bubble that won't break under the impact of a .45 caliber bullet fired from 50 feet away and can withstand temperatures of up to 400 degrees has been announced by Goodyear Aircraft Corporation. The bubble, designed to protect pilots of supersonic aircraft flying at speeds approaching Mach 3 (1950 mph), is made of an optically clear plastic laminate called Thermo-shield.

♦ ♦ ♦

Food Machinery and Chemical Corporation, New York, has been awarded a \$13.5 million Army contract to convert the former Dana Heavy Water Plant, Newport, Ind., into an Army Chemical Corps production facility. Conversion, which will cost \$8 million less than a new construction, according to estimates, will be under way by late summer. The plant, originally built by the Atomic Energy Commission in 1950-51, has been maintained on a standby basis since 1957 following a determination that the U. S. possessed an adequate stockpile of heavy water.

♦ ♦ ♦

Further expansion of the space-age electronics miniaturization program is heralded by the announcement of a new contract between the Army Signal Corps and RCA. The new agreement, for \$2,388,938, will broaden the scope of the \$5 million contract awarded to RCA in March of 1958, by providing for a wider variety of micro-elements, an extended range of element values, and the exploitation of recent advances in solid state electronics. It was pointed out that advances in electronic miniaturization have made possible the formation between two micro-wafers four one-hundredths of an inch thick and a third of an inch on a side of "a complete electronic circuit that normally would require 88 components."

THE MONTH'S BOOKS

1940 and Dunkirk

THE BATTLE OF FRANCE 1940

By Col. A. Goutard

Ives Washburn, 1959

280 Pages; Maps; Index; \$4.00

THE NINE DAYS OF DUNKIRK

By David Divine

W. W. Norton & Company, 1959

308 Pages; Maps; Index; \$3.95

Reviewed by

MAJOR CHARLES B. MACDONALD, *Staff Specialist, USAR, a civilian historian in the Office of the Chief of Military History.*

One of the theories often advanced to explain the debacle in France and the Low Countries in 1940 is that the French soldier was infested with "defeatism," that communism, corruption, and sedentary living had sapped his morale and his will to fight. In the face of the Stukas and the Panzers, the French soldier faded away.

To those who have even a superficial knowledge of the achievements of the French soldier in other recent wars, this has been hard to accept. Even in the similar debacle of 1870, never has the common soldier displayed more individual courage than did the Frenchman at Metz and Sedan. Nor has the soldier of any nation ever recovered more quickly from opening defeat to go on to eventual victory than did the *poilu* in the First Battle of the Marne.

It becomes less easy to understand the debacle of 1940 when one looks at the record of the French soldier in later days of World War II. Who can deny, for example, the credit due the French Expeditionary Corps in the drive on Rome? And what of the invasion of Southern France, the Vosges, Southern Germany? What of the *Maquis*?

The fact is, the Frenchman was, is, and probably will continue to be an excellent soldier. How then to explain the swift, overwhelming defeat in 1940?

Most of the French writing on the events of 1940 to reach this country have been of the memoir variety, pointing accusing fingers at any and everything but never dealing specifically with the military campaign itself. For the battlefield story, the American reader has had to depend on an early work, Theodore Draper's *The Six Weeks War*, written without benefit of numerous sources which became available later. Even publication of the official and authoritative

British account of the campaign (Major L. F. Ellis's *The War in France and Flanders*) could not fill the void completely, for this account *per force* concentrated on British operations. Neither work comes to grips with the canard that the defeatist French soldier was primarily at fault.

A distinguished French soldier and former instructor in military history at Saint Cyr, Colonel Goutard, has at last come forward with a candid analysis of the military campaign from the French viewpoint. The fault was not the French soldier's, Colonel Goutard says. "Frenchmen of 1940 were of the same mold as those of 1914. The stock had not degenerated." Nor did failure lie in the final analysis at the feet of political impotency or the Maginot Line complex. Despite these defects, France still could have won the opening blow of World War II in the West. France lost, Colonel Goutard maintains, because of repeated tactical and strategic blunders by French generals on the battlefield itself.

Published in France under the title 1940: *La Guerre des Occasions Perdues*, this work concentrates on the numerous lost opportunities. "The fact that Hitler won the trick does not mean that he held all the trumps," writes Colonel Goutard. "We had some, too, and they were more or less as good as his; but we should have known how to use them and cast them boldly into the game."

The author early disposes of the theory that quantitative and qualitative inferiority in weapons and troops was at the root of the failure. Training of the reserve divisions was perhaps the only genuine French deficiency of this type, and this, Colonel Goutard notes, was not necessarily fatal. The reserve divisions failed at Sedan and Dinant, but what would have been the result had the French generals sent planes and tanks to support them, "had our [reserve] infantry seen with their own eyes the harassing Stukas shot from the skies, and the enemy tanks in flames from our shells?"

Even though the French parcelled out most of their tanks as infantry support weapons, they still had four armored divisions. If but one of these had been employed vigorously to counterattack Guderian's bridgehead at Sedan during the first 14 hours when no German armor had crossed, who can predict the far-

reaching results? As late as two and even three days after the first Meuse crossing, opportunity for decisive counterattack still existed, for Guderian's 90-degree turn and quick westward thrust left the German rear wide open.

The French did send an armored division to Sedan in time, but the generals parcelled out the tanks in penny packets to establish a "contained" front from which to counterattack and never got around to the counterattack itself. They did the same thing at Dinant.

"Containment!" cries Colonel Goutard in exasperation. "It became a mania! . . . No one really wanted to counterattack. It was passed from one headquarters to the next like some unpopular fatigue."

"Imagine what it would have been like for the Germans," he continues, "if the spearhead of their advance had broken its head against an unyielding wall at the Meuse, with miles of Panzer units choking up the Ardennes roads behind them."

The so-called "Dyle Plan," upon which so much blame has been heaped, was not in itself bad. Even the error of assuming the Germans would not come through the Ardennes was not irretrievable. For the Dyle Plan committed only 10 French divisions to Belgium, and these could have turned against the Meuse crossings almost as well from the north as from the south. "Why could not the cream of the French army in Belgium have held its flank against von Bock and attacked southward?"

The real fault with the Dyle Plan was what went with it: the decision to hold so many divisions in the Maginot Line and to send the Seventh Army to Holland. Yet even these mistakes could have been overcome by quick determination of the enemy's main effort and vigorous action against it. As the Germans crossed the frontier, three French armored divisions had occupied assembly areas only 50 miles from the Meuse. "One can imagine what results if this armored group . . . had fallen on the southern flank or rear of the Panzer divisions." Yet the High Command committed the tanks in puny increments, so that seven days later none was left. Out of 2,300 to 3,000 French tanks in the northeast, only about 60 actually counterattacked in the early "decisive" days.

Even after Guderian's dash to the sea, all need not have been lost. Between 16

Selected Check List of the Month's Books

This run-down of some of the books received during the month preceding our deadline is to give our readers who like to follow current literature a monthly check list of the most important, useful and potentially popular books. Any of these titles may be purchased through the Combat Forces Book Service.

AMERICAN HERITAGE, August 1959. Has an article on POW camps of the Civil War, by Bruce Catton, which tells how unbelievably bad all of them were. Andersonville was but the worst.

FAMOUS HORSES OF THE CIVIL WAR. By Fairfax Downey. Thomas Nelson & Sons, 1959. 128 Pages; Illustrated; Index; \$2.95. True stories of 64 famous artillery and cavalry mounts. How they were mustered in, how they were cared for, how they suffered—and how some died—in battle. For youngsters.

NEW DEVELOPMENTS IN ARMY WEAPONS, TACTICS, ORGANIZATION, AND EQUIPMENT. By Major Marvin L. Worley, Jr. The Stackpole Company, 1959. 378 Pages; Illustrated; Index; \$3.95. Revised edition of a textbook describing R&D, artillery and missiles, infantry weapons and tactics, armor, airborne forces, nuclear warfare, and the role of chemical, engineer, signal, QM and transportation troops. See the review in *ARMY*, June 1958.

NEW DRILL REGULATIONS. The Stackpole Company, 1959. 130 Pages; Illustrated; Index; \$2.50. In one handy volume: drill and ceremonies from FM 22-5; cadet drill from FM 22-5A; interior guard from FM 26-5; and combat formations, signals, and battle drill.

A PHRASE AND SENTENCE DICTIONARY OF SPOKEN RUSSIAN: RUSSIAN-ENGLISH, ENGLISH-RUSSIAN. 573 Pages; Paper, \$2.75. **A PHRASE AND SENTENCE DICTIONARY OF SPOKEN SPANISH: SPANISH-ENGLISH, ENGLISH-SPANISH**. 513 Pages; Paper, \$1.75. Dover Publications, 1959. Complete,

unabridged republications of TM 30-900 and TM 30-944, which were especially prepared by nationally known linguists for the Army. Sample sentences illustrate different shades of meaning and idiomatic nuances of each term.

RICHARD COEUR DE LION. By Philip Henderson. W. W. Norton & Company, 1959. 256 Pages; Illustrated; Index; \$5.95. Biography of an outstanding tactician and military engineer who twice led armies to within a few miles of Jerusalem and won a brilliant victory over Saladin.

THAT DEVIL FORREST. By John A. Wyeth. Harper & Brothers, 1959. 614 Pages; Illustrated; Maps; Index; \$6.95. Reprint of *Life of General Nathan Bedford Forrest*, first published in 1899, reissued in 1908, going out of print in 1924. This edition has been very lightly edited. The narrative is based on first-hand information, but naturally is subjective.

THE WAY TO APPOMATTOX. Thomas Yoseloff, 1959. 835 Pages; Illustrated; Maps; Index; \$4.95. Final volume in the popular edition of *Battles and Leaders*, and contains the index to the four volumes. Type page has been reduced, but there have been no deletions. The regular four-volume edition costs \$30.00. See the review in *ARMY*, January 1957.

ZEEBRUGGE. By Barrie Pitt. Ballantine Books, 1959. 360 Pages; Illustrated; Maps; Paper, \$5.00. The full story of the raid on the German submarine base at Zeebrugge on 22 April 1918 by a thousand men led by Roger Keyes. A blow-by-blow account of the meticulous planning and the desperate action on the Mole.

and 22 May, the growing gap between the Panzers and their supporting infantry provided the French "a wonderful tactical opportunity." To hold the flanks of a corridor which at Arras was only 25 miles wide, the Germans had only one division for every 40 to 50 miles of front. "The French had only to turn against this corridor, either with their excellent strategic reserve in Belgium, or with the eastern armies quickly formed into a strategic reserve on the Somme, and the Panzers' daring dash would swiftly have ended in tragedy for them." The counterattack by only 74 British tanks at Arras had been enough in itself to frighten von Rundstedt into halting

the Panzers short of Dunkirk.

But the French generals clung to "a doctrine and military procedure derived from the 1914-18 war." No one did more than issue "hopelessly outdated orders to generals who had lost their troops."

"Could it then be said," Colonel Goutard asks, "that the French Army had any High Command at all?"

This is a provocative, highly readable book. Though it is based primarily on secondary sources, few of these have been readily available in this country in translation. One must cavil only with the author's endorsement of the generally discredited theory that Hitler concurred in halting the armor short of

Dunkirk in order to ease a possible deal with the British. Major Ellis's clear and restrained account of Hitler's concurrence remains the more reasonable explanation.

Almost coincidentally with publication of Colonel Goutard's book in this country, the literature on the 1940 campaign has been further enriched by Mr. Divine's *The Nine Days of Dunkirk*. Author of several volumes on the Royal Navy in World War II, Mr. Divine gives a reliable and highly dramatic account of the Dunkirk evacuation, some of it from personal observation, much of it from contemporary reports and diaries. He summarizes the entire campaign and then, in effect, puts Dunkirk under the microscope.

Mr. Divine provides an incidental endorsement of Colonel Goutard's defense of the French soldier, for the *poilu* at Dunkirk stands comparison well with the stalwart British who turned that pre-ordained debacle into a glorious accomplishment. It was the Frenchman who held the southern flank of the perimeter, even after German armor returned to the fight. It was he who constituted the rear guard. Discipline in some French units was so deeply instilled that when the men lined up for evacuation, they refused to board the ships unless all their unit could be transported together.

Dunkirk succeeded, Mr. Divine tells us, far beyond the most optimistic expectations of those who set it in motion—848 ships in nine days transported 338,000 troops to England. It succeeded because intrepid sailors, soldiers, airmen, and civilians saw the necessity of it, rose to incredible heights of heroism, and made it work.

Take the experience of R. B. Brett, a civilian in command of a small boat. Wading ashore, he called out, "I want sixty men!" What he thought was a causeway leading into the water turned out to be a "perfectly ordered straight column of men about six abreast, standing as if on parade." When Brett reached them, a sergeant stepped forward. "Yes, sir," the sergeant said, "sixty men, sir?" As the column maintained perfect formation in the surf, the sergeant designated the sixty who were to go.

On Saturday, 1 June, the day the Luftwaffe vented its full fury on the roadstead and the Channel and forced abandonment of daylight evacuation, 31 ships were lost, 11 seriously damaged. "And yet, such is the strange quality of Dunkirk that through it all the loading went on, hardly losing its rhythm. Through it all the small craft worked, pausing sometimes to rescue drowning men from the water, helping to tow a damaged ship, standing by a sinking one. . . ."

Through the course of his book, Mr. Divine effectively explodes a number of myths about Dunkirk. Leopold of the

Belgians, for example, far from betraying the British army, did all he could to protect the British flank and keep his allies informed of the state of his forces. Nor did the British "desert" the French. French authorities actually began to consider evacuation on 19 May at precisely the same time as the British. If one discounts the rear-echelon British troops who were evacuated before the main operation began, the number of French and Belgians taken off was almost identical to the number of British troops.

Nor was the fleet which plied back and forth to Dunkirk a spontaneous outpouring of civilian craft, unguided, unprotected. Many civilian craft were involved, but these long before had been registered by a foresighted naval command. The fact is that Dunkirk was a minutely planned, closely supervised, formal naval operation, an improvisation, to be sure, but an accomplishment not of amateurs but of professionals working under competent professional authority.

Considered individually, each of these books makes a major contribution to an understanding of the campaign of 1940. Together, they provide a comprehensive account which needs only addition of the British official history to round it out.

Japanese High Command

KÖGUN: The Japanese Army in the Pacific War
By Saburo Hayashi and Alvin D. Coox
Marine Corps Association, 1959
249 Pages; Illustrated; Maps; Index; \$4.50

Reviewed by

DR. STANLEY L. FALK, who has served as Historical Officer, General Headquarters, Far East Command.

By the early summer of 1942, scarcely seven months after their attack on Pearl Harbor, the Japanese had carved out a major empire in the Pacific and in Southeast Asia. The flag of the Rising Sun flew proudly over such distant outposts as the cold and foggy Aleutians, the steaming jungles of New Guinea, and the great naval bastion of Singapore. A vast perimeter stretched from the North Pacific to the southern Solomons and along the Malay Barrier to the gates of India. Defending the huge area thus enclosed was *Dai Nippon Teikoku Rikugun*—the Imperial Japanese Army—referred to more simply as *Kōgun*, or the Imperial Army. Its soldiers, flushed with victory and seemingly invincible, stood at the apex of their glory. Yet within three short years all was lost. In August 1945 the once-proud warriors of *Yamato* listened with bowed heads and in stunned silence to the unexpected words of their Emperor as he announced his decision to surrender, "enduring the unendurable and suffering the insufferable."

The story of the Japanese Army's stunning victories and agonizing defeat is told by former Colonel Saburo Hayashi,

who has set out to write what he calls "a faithful account" of the Army High Command. The aim of his work is threefold: to describe the Army's estimate of the situation throughout the war, to explain the basis of operational plans, and to tell what actually happened during the conduct of operations.

Colonel Hayashi, a graduate of the Japanese Military Academy and a staff officer for most of his career, was chief of the Organization and Mobilization Section of the Army Operations Bureau at Imperial General Headquarters and ended the war as Military Secretary to War Minister Anami. He has written a slim and rather sketchy volume that, while disappointing in its brevity, is still the only single work available in English to outline so fully the development of Japanese Army plans and operations in the context of political events.

Published originally in Japan, the book has been translated under the direction of Dr. Alvin D. Coox, member of the faculty of the University of Maryland's Far Eastern Division. Dr. Coox has contributed a large number of informative footnotes in a not too successful attempt to compensate for the sketchiness of Colonel Hayashi's original manuscript. He has also compiled an "Army War Diary" of important events and added short but useful military biographies of nearly a hundred Japanese officers.

While Colonel Hayashi's narrative is frustratingly thin and episodic, it does throw light on a number of important subjects such as civil-military relations, rivalry between the armed services, German-Japanese military collaboration, and the military attitude toward science and technology. Especially interesting are brief descriptions of belated and abortive attempts to establish a single Japanese Air Force and to unify the Army and Navy.

Kōgun is a handy survey of the Japanese Army's participation in the Pacific War. But it is not the definitive military history of the Japanese side that is still badly needed for American military readers.

Wolfe the General

THE SAVAGE YEARS
By Brian Connell
Harper & Brothers, 1959
279 Pages; Illustrated; Maps; Index; \$4.50
WOLFE AT QUEBEC
By Christopher Hibbert
World Publishing Company, 1959
194 Pages; Maps; Index; \$4.50

Reviewed by

LYNN MONTROSS, author of several works on military history, including two on the Revolutionary War.

Few battles of history have had such an enduring fame as the clash on the Plains of Abraham in which both the victorious and vanquished generals were

mortally wounded at the moment of tactical truth. The two hundredth anniversary of the event has been commemorated by British authors in two books of more than average merit.

There is little to choose between Brian Connell's *The Savage Years* and Christopher Hibbert's *Wolfe at Quebec*. The first is more detailed as a biography and the second excels as an account and evaluation of the three-month siege lead-

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ing up to the battle of Quebec on 13 September 1759.

It is one of the mysteries of Britain's hero worship that two of the island's most exalted warriors were anything but conventional halo-wearers. Nelson disobeyed naval orders and sinned scandalously against the moral codes. James Wolfe was a nasty-tempered invalid—a tall, gaunt figure with a violently receding chin and forehead which emphasized his long nose and brought his face to a peak.

A weakling as a boy, he was dosed by his mother with a home remedy made from garden snails, earthworms, agri-mony, hartshorn, saffron and red dock roots. If this concoction did not cure, at least it did not kill; and young Wolfe saw his first military service at the age of 15 as an ensign. A year later he took part in the battle of Dettingen.

Wine, women, and song had no charms for him. His only interest was war. In 1745, as a major during the Jacobite rebellion in Scotland, he was aide to the brutal General "Hangman" Hawley and carried out that sadist's orders with no apparent qualms. Victory, as Wolfe saw it, excused the harshest means.

Mr. Connell accepts the traditional picture of the military genius who brought at Quebec "the ten minutes that changed America." Mr. Hibbert, on the other hand, goes so far as to conjecture that Wolfe bribed as well as fought his way into the fortress city. This hypothesis isn't convincing, but there is sound historical evidence to the effect that the fight at Quebec did not bring the French and Indian War to a dramatic and victorious finish. On the contrary, a second encounter took place on the Plains of Abraham the following April. Brigadier General James Murray, who succeeded Wolfe, was defeated with heavy losses by a French-and-Canadian army under the competent Chevalier de Lévis, who succeeded Montcalm.

The vanquished army, reduced to desperate straits by casualties, disease and privations, would probably have been compelled to surrender Quebec had not a British squadron arrived in the nick of time with provisions and reinforcements. Thus it was seapower in the long run that won Canada from the French. Even so, it took another land campaign in 1760 by the able General Jeffrey Amherst to collect the final victory after a fighting advance from the head of Lake Champlain to Montreal.

Wolfe's generalship is held in question now and then by Mr. Hibbert. As evidence, he points to a British preliminary attack, on 31 July 1759, which was so badly planned that the Redcoats were repulsed with 443 killed and wounded by French forces that didn't lose a man.

The British commander did not have

the confidence of his three brigadiers. They were the authors of the plan for the ascent of the cliff to the Plains of Abraham—a tactical solution which they advanced after declaring themselves against three schemes of attack proposed by Wolfe.

In fairness to Wolfe, it should be added that he was ill in bed. Something had to be done before the winter ice closed the Saint Lawrence to British warships, which were essential to success. Wolfe "acquiesced in the proposal" of his subordinates, as he wrote to Pitt, adding that "we are now preparing to put it into execution." Obviously, his brigadiers had come up with a much better idea than his three plans, one of which merely involved a repetition of the disastrous July attack.

At least, Wolfe had the support of his own country, which was more than could be said for his opponent. Mr. Connell's book gives the better account from the French viewpoint, and it is plain that Montcalm was sorely handicapped by incompetent and dishonest officials sent out from Paris. The garrison at Quebec was robbed by the peculations of these opportunists.

Both generals made an appealing picture on the day of battle. Montcalm led a materially inferior army to the counterattack with magnificent resolution. Wolfe, pale and haggard after two wounds, stood proudly at the head of his men until he ordered the volley at fifty paces that cut the French line to pieces. A few minutes later he collapsed from a third wound, a ball through the lungs, just as his mortally hurt adversary was being carried from the field.

The two books under review do not always agree. But both reach the conclusion that, with the Canadian frontier secured, the stage was set for the American colonists to make their bid for independence.

Sociology and Soldiers

SOCIOLOGY AND THE MILITARY ESTABLISHMENT

By Morris Janowitz
Russell Sage Foundation, 1959
112 Pages; \$1.50

Reviewed by

CAPT. ROGER W. LITTLE, *Medical Service Corps, a sociologist who has done important research in the mores and customs of small combat units, and has written many articles on these subjects.*

Social science long has been rejected by military planners and military policy-makers. In an organization international in scope and intimately concerned with governing strange societies, in the Army there is not a single MOS for a sociologist or a social anthropologist. Military conceptions of human behavior are derived almost exclusively from a dogmatic individualistic psychology which provides

a dim view, if any, of levels of integration above a personality.

Sociologist Janowitz has in this short monograph surveyed the scanty research in military organization and has indicated the blind spots in this limited perspective. His efforts are intended to demonstrate the potential utility of sociology to the military establishment. He relates major changes in organization to corresponding changes in the technology of warfare in the direction of greater centralization, permanence, and complexity. Although military organization has become increasingly "civilianized," it will continue to exist as a unique institution because of the persisting possibility of war and the requirements of continued combat readiness. The shift of the military mission from a potentially active force to a symbolic deterrent has implications for the growth of a military pacifism which he attributes to the concern of military leaders for the political effects of violence.

Technology has had other broad effects. The probability of conflict between the commander and his staff has been aggravated. The traditional conception of the rank system has been changed from a pyramid into a diamond-shaped hierarchy with commanders at the top, technically specialized occupations in the bulge, and combat tasks at the bottom. Since status is no longer allocated purely on the basis of authority the existing authority system is jeopardized. Corresponding changes in military discipline have affected the assimilation of military roles, the solidarity of primary groups, and the techniques by which command and control are exercised.

As a consequence of the narrowed gap between military organization and the larger society, the military leader has become increasingly sensitive to the broad social implications of his actions. But he has not become correspondingly aware of the necessity for using a sociological perspective in dealing with different societies and power systems. Instead, he continues to employ crude stereotypes based on personal experiences in combat operations. Sociology has systematic knowledge and research techniques which could facilitate the conduct of military government, comparative studies of organizations, and psychological warfare.

This monograph could assist in demonstrating the value of sociology—which is not psychology—in military thought. The greatest obstacle remains in the cultural bias against structural theories, a point forcefully made by Whyte in *The Organization Man*. So long as the individual is the only object of scientific importance, the social structure of military organization and its impact on society will remain the province of the insightful novelist or playwright.



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AUSA's 1959 Annual Meeting received detailed coverage in local newspapers through attendance of chapter delegates including Lt. Gov. Burnet R. Maybank.

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Chapter reorganized in July; above officers elected.

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Board of Directors meeting 14 August planned program celebrating 140th Anniversary of the Army in Nebraska.

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Chapter has arranged for special chapter tickets for West Point football games, including first game between Army and Air Force Academy.

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More than 1,000 members and guests enjoyed a chuckwagon dinner in the Garden of the Gods 25 July, at a Chapter-sponsored "Toast to the Army." The Chamber of Commerce of Colorado Springs was co-sponsor of the event, which was arranged to reciprocate for the two meetings which were held at Fort Carson. Local businessmen

acted as hosts to Fort Carson personnel. The dinner received wide publicity in local news media.

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Speaking before 140 members of the chapter 23 July, Lt. Gen. William S. Lawton, Comptroller of the Army, stressed the importance of AUSA in assisting the Army to achieve its goals. Another honored guest at the meeting was SFC John A. Pope, selected as the outstanding USARYIS enlisted man, and chosen to represent the chapter at the 1959 Annual Meeting. Directors' meetings were held in April and July.

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SOUTHERN ARIZONA CHAPTER—P.O. Box 596, Fort Huachuca, Arizona. President: Mr. Clayton A. Smith; Vice President: Mr. George W. Seeley; Secretary-Treasurer: Mr. Aaron Paul.

SOUTHERN COLORADO CHAPTER—P.O. Box 653, Pueblo, Colorado. President: Mr. Samuel T. Jones, Jr.; First Vice President: Mr. L. A. Reynolds; Second Vice President: Mr. John Ladd; Secretary: Mr. Julian R. Lee; Treasurer: Mr. Ralph Warren.

SOUTHSIDE VIRGINIA CHAPTER—Secretary: Lt. Col. Earl Sleeper, Deputy AC of S, G-1, Hq QM Trng Cmd, Ft Lee, Virginia. President: Mr. Francis K. Godwin; First Vice President: Mr. William R. Craig; Second Vice President: Mr. J. W. Nussey, Jr.; Treasurer: 1st Lt. Byron A. Parham.

SOUTHWEST OKLAHOMA CHAPTER—P.O. Box 1345, Fort Sill, Oklahoma. President: Col. Everett C. Williams, USA-Ret.; First Vice President: Mr. Bernell Gilbert; Second Vice President: Mr. C. Vernon Howell; Secretary: Maj. Edward R. Hutchins; Treasurer: Brig. Gen. J. F. Brittingham, USA-Ret.; Asst. Secretary: MSgt Charles T. Gatz, Jr.

Chapter had a prominent part in welcoming and entertaining top civilian visitors to Fort Sill for "Operation Understanding," week-end of 1 August.

TAMPA AREA CHAPTER—President: Lt. Col. Arthur D. Brown, USAR, P.O. Box 434, Tampa 1, Florida. First Vice President: Lt. Col. Judson B. De Loach; Second Vice President: Maj. Lambert P. Friederich, FlaARNG; Third Vice President: 1st Lt. John Clements; Secretary: MSgt Aubrey W. Akin; Treasurer: Lt. Col. Wendell S. Lucas, USA-Ret.

TENNESSEE VALLEY CHAPTER—Secretary-Treasurer: Mr. George K. Williams, P. O. Drawer 917, Huntsville, Alabama. President: Mr. Tom Thrasher; First Vice President: Mr. Joe Starnes; Second Vice President: Mr. Will Halsey.

3d ARMORED DIVISION CHAPTER—Secretary: Maj. James C. Waller, Headquarters, 3d Armored Division, APO 39, New York, New York. President: Col. Kelso G. Clow; First Vice President: Lt. Col. Alexander G. Fraser; Second Vice President: Lt. Col. Robert V. Dague; Treasurer: Sgt. Maj. Bruce C. Shankland.

More than 600 members attended meeting 10 July at Fliegerhorst Kaserne, Hanau. New president, and treasurer (listed above) were elected. Nine awards to outstanding enlisted men, in the form of membership in AUSA, were announced. Principal speaker was Lt. Gen. Paul D. Adams, CG US V Corps, who spoke on limited warfare with special reference to the recent operations in Lebanon. Division Choir and a moving picture, plus dinner and other refreshments, rounded out the program.

3d INFANTRY DIVISION CHAPTER—Secretary: Maj. Robert M. Lathrop, 3d Admin. Co., 3d Infantry Division, APO 36, New York, New York. President: Col. Hubert D. Thomte; First Vice President: Lt. Col. Morris G. Rawlings; Second Vice President: Lt. Col. John W. MacIndoe; Asst.



HEIDELBERG, GERMANY. Maj. Gen. P. F. Lindeman, USAREUR G1 (second from left), accepts AUSA plaque after election as Heidelberg Chapter's President, from Brig. Gen. Edward F. Penaat, USAREUR Provost Marshal and outgoing President. Others are, left to right: MSgt. Frank J. Bennett, retiring Second Vice President; Col. Morton P. Brooks, retiring First Vice President; Capt. Charles H. Lively, retiring Treasurer.

Secretary: Capt. James A. Wingate; Treasurer: Maj. Robert L. Nicol; Asst. Treasurer: MSgt M. E. Strophe.

TOPEKA CHAPTER—Secretary: Mr. Bill M. Stevick, U. S. Army Reserve Training Center, 21st and Washington, Topeka, Kansas. President: Mr. Harry W. Colmery; First Vice President: Mr. George C. Schnellbacher; Second Vice President: Mr. Dale E. Moorman; Treasurer: Mr. Henry B. Alberg.

TRI-VALLEY CHAPTER—c/o Unit Advisor, United States Army Reserve, 310 N.P. Ave., Fargo, N. D. President: Maj. Julian L. Benshoof, USAR; First Vice President: Mr. Truman C. Wold; Second Vice President: Maj. Adolph K. Stromme, USAR; Corresponding Secretary: Col. Sidney E. Iverson, USAR; Recording Secretary: MSgt Frank C. Gumeringer, USAR; Treasurer: MSgt Martin A. Holsen, USNG; Chaplain: 1st Lt. Archie N. Campbell, USAR.

24th VICTORY DIVISION CHAPTER—Secretary: MSgt Robert O'Rourke, 24th Admin Co (AG Section), APO 112, New York, New York. Honorary President: Maj. Gen. Ralph C. Cooper; President: Col. Granville A. Sharpe; First Vice President: Lt. Col. Charles E. Howard; Second Vice President: MSgt Charles T. Haas; Treasurer: Capt. Thomas B. Leonard.

TWIN CITIES CHAPTER—Secretary: Col. John H. Derrick, USA-Rtd., 930 McKnight Building, Minneapolis 1, Minn. President: Mr. Clyde A. Parton; Vice President: Mr. Russell H. Johnson; Treasurer: Lt. Col. Robert L. Stuebing, USAR.

UTAH CHAPTER—P.O. Box 2565, Fort Douglas Station, Fort Douglas, Utah. President: Col. M. B. Kauffman; First Vice President: Col. Victor Olsen; Second Vice President: Lt. Col. J. P. Lofreddo; Secretary: Lt. Col. Chester K. Dawse, USAR; Treasurer: Lt. Col. S. A. Spalding, USAR.

VERDUN CHAPTER—Secretary: Lt. Col. R. H. Vinding, U. S. Army General Depot, Verdun, APO 122, New York, N. Y. President: Lt. Col. Charles J. Schavers; First Vice President: Lt. Col. Harold E. Hasfjord; Second Vice President: Maj. Curtis D. Ramsdel; Treasurer: CWO Robert E. Hentges.

VIRGINIA PENINSULA CHAPTER—Box 11, Fort Monroe, Virginia. President: Mr. George T. Abernathy; First Vice President: Lt. Col. Richard Newman; Second Vice President: Mr. Robert J. Curtin; Secretary: Mr. Reinhold W. Herman; Treasurer: Mr. William F. Hampshire.

WASHINGTON STATE CHAPTER NO. 1—Secretary: Lt. Col. John A. Spencer, Fort Lewis Exchange, Fort Lewis, Washington. President: Mr. Fred C. Osmer; First Vice President: Mr. Ray Clark; Second Vice President: Mr. Harold Meyers; Treasurer: Mr. Nat Hatcher.

WESTCHESTER COUNTY CHAPTER—Box 444, Hq U. S. Army Garrison, Fort Slocum, N. Y. President: Mr. Harold Greene; First Vice President: Mr. Jesse Deitch; Second Vice President: Mr. Raymond O. Miller; Secretary-Treasurer: Mr. John E. Leykam.

WILLIAM PENN CHAPTER—Bridge and Tacony Streets, Philadelphia 37, Pa. President: Mr. George A. Miller, Jr.; First Vice President: Mr. Isidore

T. Shapiro; Second Vice President: Mr. Thomas C. Kempin; Secretary: Mr. George F. Wilhelm; Treasurer: Mr. Howard E. Moore.

WOLTERS CHAPTER—Corresponding Secretary-Treasurer: Capt. William E. Ross, U. S. Army Hospital, Camp Wolters, Texas. President: Mr. Frank Fulgham; First Vice President: Mr. Frank Meyers, Jr.; Second Vice President: Mr. Frank Woodruff; Third Vice President: Lt. Col. Louis Csergie; Recording Secretary-Treasurer: Mr. Travis Key.

YAKIMA VALLEY CHAPTER—Secretary: Maj. Jim E. Cherry, Hq. U. S. Army Garrison, Yakima Firing Center, Yakima, Washington. President: Mr. Frederick C. Schneider; First Vice President: Mr. E. Fred Velikanje; Second Vice President: Lt. Col. John Trowbridge, USAR; Treasurer: Maj. James R. Myers.

ROTC COMPANIES

Cadet representatives from 22 AUSA ROTC Companies, and three institutions which do not yet have Companies, attended AUSA's 1959 Annual Meeting and participated in the special ROTC programs 2, 3 and 5 August. All cadets at the Meeting met the Secretary of the Army and the Chief of Staff at the luncheon Monday; Gen. Lemnitzer invited the cadets to visit him in his office later in the afternoon—an invitation which was accepted with alacrity. Many cadets considered the visit to the Chief of Staff's office the high point of the Annual Meeting.

The special ROTC program included a presentation by a Major General and six other officers on army careers, and visits to Davison Army Air Base, the nuclear reactor at Fort Belvoir, and a Nike site. Only a few cadets were present Sunday for conducted tour of the Tomb of the Unknown Soldiers at Arlington National Cemetery.

The consensus of the cadets was that attendance was an unforgettably profitable experience, and that they would recommend attendance to all eligible cadets.

CANISIUS COLLEGE COMPANY, Canisius College, Buffalo, New York—Captain: Cadet George D'Amico; First Lieutenant: Cadet Patrick Cunningham; Second Lieutenant: Cadet Edward McLaughlin; First Sergeant: Cadet Joseph Bermingham.

CAVALIER COMPANY, University of Detroit, Detroit, Michigan—Captain: Cadet John R. Kane; First Lieutenant: Cadet Russell W. Green; Second Lieutenant: Cadet Lawrence J. Youngblood; First Sergeant: Cadet Phillip F. Ringo; Sergeant: Cadet William F. Walsh.

CHIEFTAIN COMPANY, Seattle University, Seattle, Washington—Captain: Cadet Wilfred C. Stump; First Lieutenant: Cadet David B. Moore; Second Lieutenant: Cadet Michael R. Ladner; First Sergeant: Cadet Clyde D. Lynn.

CITADEL COMPANY, The Citadel, Charleston, S. C.—Captain: Cadet A. E. Richards; First Lieutenant: Cadet R. Mikytuck; Second Lieutenant: Cadet D. R. Dent; First Sergeant: Cadet F. P. Mood, Jr.

CLARKSON COMPANY, Clarkson College of Technology, Potsdam, New York—Captain: Cadet Kenneth Kittelberger; First Lieutenant: Cadet Chip Brault; Second Lieutenant: Cadet Everett Greenwood; First Sergeant: Cadet Rolfe Gerhardt.

COLORADO STATE UNIVERSITY COMPANY, Colorado State University, Fort Collins, Colorado—Captain: Cadet T. Marvin Williamsen; First Lieutenant: Cadet Paul R. Klinkerman.

COUGAR COMPANY, Washington State University, Pullman, Washington—Captain: Cadet Ralph D. Gifford; First Lieutenant: Cadet Ralph M. Sasaki; Second Lieutenant: Cadet Dean W. Knox; First Sergeant: Cadet James H. Fox.

DAKOTA COMPANY, North Dakota Agricultural College, Fargo, N. D.—Captain: Cadet Carl Haas; First Lieutenant: Cadet George Bodmer; Second Lieutenant: Cadet Frederick Williamson; First Sergeant: Cadet Don Kraft.

DICKINSON COLLEGE COMPANY, Dickinson College, Carlisle, Pa.—Captain: Cadet Neil Lovsner; First Lieutenant: Cadet Donald Proud;

Second Lieutenant: Cadet Robert Richardson; First Sergeant: Cadet Rocco Falvello; PIO Sergeant: Cadet Ronald Derenzo.

EASTERN CADET OFFICERS COMPANY, Eastern Kentucky State College, Richmond, Kentucky—Captain: Cadet Estel M. Hobbs; First Lieutenant: Cadet Larry W. Wood; Second Lieutenant: Cadet Wilburn H. Harmon; First Sergeant: Cadet Delbert F. Shouse.

EDMUND R. WALKER COMPANY, University of Connecticut, Storrs, Conn.—Captain: Cadet James H. Walker; First Lieutenant: Cadet Matt Koiva; Second Lieutenant: Cadet Benjamin Hartley; First Sergeant: Cadet Robert L. Peck.

EVERGREEN COMPANY (EWCE), Eastern Washington College of Education, Cheney, Washington—Captain: Cadet Karl Nehammer; First Lieutenant: Cadet Robert Brumblay; Second Lieutenant: Cadet Armand Boatman; First Sergeant: Cadet David Cottingham.

FARRIS-WARE COMPANY, Prairie View A&M College, Prairie View, Texas—Captain: Cadet Frederick Greene; First Lieutenant: Cadet Tommy Thorne; Second Lieutenant: Cadet James Wooten; First Sergeant: Cadet James O. Walker.

FLORIDA SOUTHERN COLLEGE COMPANY, Florida Southern College, Lakeland, Florida—Captain: Cadet Charles C. Johnson; First Lieutenant: Cadet John E. Simpson; Second Lieutenant: Cadet Richard V. Doty; First Sergeant: Cadet Charles B. Callaway.

GEORGETOWN UNIVERSITY ROTC COMPANY, Georgetown University, Washington, D. C.—Captain: Cadet Dennis J. Flynn; First Lieutenant: Cadet Charles F. Magnees; Second Lieutenant: Cadet George P. Grau, III; First Sergeant: Cadet Richard R. Schalk.

GORDON COMPANY, Gordon Military College, Barnesville, Georgia—Captain: Cadet James E. Ethridge; First Lieutenant: Cadet David L. Camner; Second Lieutenant: Cadet Daniel E. Zellner; First Sergeant: Cadet Dennis McKay.

HENRY D. STYER COMPANY, Utah State University, Logan, Utah—Captain: Cadet Orvil G. Hunsaker; First Lieutenant: Cadet John N. Giboney; Second Lieutenant: Cadet Paul F. Cook; First Sergeant: Cadet Charles K. Ashbaker.

IDAHO STATE COLLEGE COMPANY, Idaho State College, Pocatello, Idaho—Captain: Cadet Earl C. Royle; First Lieutenant: Cadet Douglas Johnson; Second Lieutenant: Cadet David Six; First Sergeant: Cadet Dale Otto.

ILLINI COMPANY, University of Illinois, Champaign, Illinois—Captain: Cadet Richard Sanders; First Lieutenant: Cadet Joseph Epkins; Second Lieutenant: Cadet Edward Schloz; First Sergeant: Cadet Kendall Fugate.

INDIANA STATE TEACHERS COLLEGE ROTC COMPANY, State Teachers College, Indiana, Pennsylvania—Captain: Cadet William Vernon Miller; First Lieutenant: Cadet Warren Neal Edmiston; Second Lieutenant: Cadet Richard A. Erickson; First Sergeant: Cadet Arthur J. Cornell.

J. B. CADE COMPANY, Southern University and A&M College, Baton Rouge 7, Louisiana—Captain: Cadet Alex A. Burnes; First Lieutenant: Cadet Walton P. Walker; Second Lieutenant: Cadet Henry S. Brown; First Sergeant: Cadet Lloyd A. Givens, Jr.

JOHN CARROLL UNIVERSITY COMPANY, John Carroll University, Cleveland 18, Ohio—Captain: Cadet Patrick Wagner; First Lieutenant: Cadet William Doucette; Second Lieutenant: Cadet Martin Reagan; First Sergeant: Cadet Martin Hultz.

KANSAS UNIVERSITY COMPANY, University of Kansas, Lawrence, Kansas—Captain: Cadet R. D. Ohmart; First Lieutenant: Cadet E. F. Reilly; Second Lieutenant: Cadet J. B. Nowlin; First Sergeant: Cadet M. A. Johnson.

KEMPER MILITARY SCHOOL COMPANY, The Kemper School, Boonville, Missouri—Captain: Cadet M. R. Richardson; First Lieutenant: Cadet Joseph N. Sailor; Second Lieutenant: Cadet R. A. Wagner; First Sergeant: Cadet Merle E. Duensing.

LA SALLE ROTC COMPANY, La Salle Military Academy, Oakdale, Long Island, New York—Captain: Cadet Pasquale Di Lorenzo; First Lieuten-

ant: Cadet Raymond Aexel; Second Lieutenant: Cadet Albert Pardini; First Sergeant: Cadet Andrew Capelli.

LELAND STANFORD JUNIOR UNIVERSITY COMPANY, Stanford University, Stanford, California—Captain: Cadet Conway Reid Rogers; First Lieutenant: Cadet William Franklin Kelly; Second Lieutenant: Cadet Forest Leslie Grieves; First Sergeant: Cadet John Walden Bassett, Jr.

LOUISIANA STATE UNIVERSITY COMPANY, Louisiana State University, Baton Rouge 3, Louisiana—Captain: Cadet Raymond McCluer; First Lieutenant: Cadet Richard Lipsey; Second Lieutenant: Cadet Lynn Ponder; First Sergeant: Cadet D. F. Gordon, Jr.

LOYOLA COLLEGE COMPANY, Loyola College, Baltimore 10, Maryland—Captain: Cadet Albert A. Muehlberger; First Lieutenant: Cadet Louis T. Santoni; Second Lieutenant: Cadet Ray N. Weinstein; First Sergeant: Cadet Thomas E. Hittselberger.

LOYOLA OF THE SOUTH COMPANY, Loyola University, New Orleans 18, Louisiana—Captain: Cadet Malcolm D. Schwarzenbach, Jr.; First Lieutenant: Cadet Robert L. Wilkie; Second Lieutenant: Cadet Patrick J. Browne; First Sergeant: Cadet Sidney F. Raymond.

THE LOYOLA UNIVERSITY COMPANY, Loyola University, 6525 Sheridan Road, Chicago 26, Illinois—Captain: Cadet Edward Ptaszek; First Lieutenant: Cadet Daniel Alkovich; Second Lieutenant: Cadet Thomas Flatley; First Sergeant: Cadet Steve Perry.

LT. CHARLES J. FITE COMPANY, Gettysburg College, Gettysburg, Pennsylvania—Captain: Cadet Ronald Nitzsche; First Lieutenant: Cadet Ted Johnson; Second Lieutenant: Cadet William Pursch; First Sergeant: Cadet Robert Doerschner.

MAD ANTHONY WAYNE COMPANY, University of Toledo, Toledo, Ohio—Captain: Cadet Garland Achenbach; First Lieutenant: Cadet Robert Schallitz; Second Lieutenant: Cadet James Schmidbauer; First Sergeant: Cadet Keith Eubanks.

THE MANLIUS SCHOOL, The Manlius School, Manlius, New York—Captain: Cadet William W. Rankin; First Lieutenant: Cadet Taylor Devine; Second Lieutenant: Cadet John Ramsey; First Sergeant: Cadet Russell A. Jahn; Staff Sergeant: Cadet Peter Cookson.

MOCCASIN COMPANY, University of Chattanooga, Chattanooga, Tenn.—Captain: Cadet Robert Bruckner; First Lieutenant: Cadet James Minyard; Second Lieutenant: Cadet Larry Schwartz; First Sergeant: Cadet John Kosik.

MONTANA STATE UNIVERSITY ARMY ROTC COMPANY, Montana State University, Missoula, Montana—Captain: Cadet Warren Drew; First Lieutenant: Cadet Brian T. Grattan; Second Lieutenant: Cadet Ronald C. Simon; First Sergeant: Cadet Rex W. Lincoln.

NEW YORK UNIVERSITY HEIGHTS COMPANY, New York University, 181st St. and University Ave., New York 53, New York—Captain: Cadet Joseph Bohn; First Lieutenant: Cadet Robert Williams; Second Lieutenant: Cadet Lewis Samuels; First Sergeant: Cadet David Hittner.

PENNSYLVANIA STATE UNIVERSITY COMPANY, The Pennsylvania State University, University Park, Pennsylvania—Captain: Cadet Michael J. Pepe; First Lieutenant: Cadet Samuel L. Collins; Second Lieutenant: Cadet Michael Roeberg; First Sergeant: Cadet Gene W. Rush.

PUERTO RICO COMPANY, University of Puerto Rico, Rio Piedras, Puerto Rico—Captain: Cadet Rafael Pagan; First Lieutenant: Cadet Paul Menendez; Second Lieutenant: Cadet Roberto Frontera; First Sergeant: Cadet Eduardo Figueroa.

RAM COMPANY, Fordham University, New York 58, New York—Captain: Cadet Nicholas E. Barreca; First Lieutenant: Cadet Anthony D. Imhof; Second Lieutenant: Cadet Edward H. Cummings; First Sergeant: Cadet Anthony D. Sullivan.

ROBERT E. SYLVEST COMPANY, Northwestern State College of Louisiana, Natchitoches, Louisiana—Captain: Cadet Eugene W. Scott, Jr.; First Lieutenant: Cadet Thomas E. Lewis; Second Lieutenant: Cadet Charles R. Whitehead; First Sergeant: Cadet Leland L. Sullivan.

SIENA ROTC COMPANY, St. Bernardine of Siena College, Loudonville, New York—Captain: Cadet Richard W. Andrews; First Lieutenant: Cadet William J. Perreault; Second Lieutenant: Cadet David L. Carpentier; First Sergeant: Cadet George F. Beaulac.

SIOUX COMPANY, University of North Dakota, Grand Forks, North Dakota—Captain: Cadet Philip R. Braeger; First Lieutenant: Cadet Allen I. Olson; Second Lieutenant: Cadet Kenneth D. Voigt; First Sergeant: Cadet Donald H. Niles.

"SOONER COMPANY", University of Oklahoma, Norman, Oklahoma—Captain: Cadet R. C. Poe; First Lieutenant: Cadet T. B. Gobble; Second Lieutenant: Cadet J. C. McKenzie; First Sergeant: Cadet H. O. Sims.

ST. NORBERT COLLEGE COMPANY, St. Norbert College, West de Pere, Wisconsin—Captain: Cadet Jerald A. Mayhew; First Lieutenant: Cadet Paul F. Sinkler; Second Lieutenant: Cadet Gary H. Brux; First Sergeant: Cadet Herbert M. Heili.

TEXAS CHRISTIAN UNIVERSITY COMPANY, Texas Christian University, Fort Worth 9, Texas—Captain: Cadet Ray Leuty; First Lieutenant: Cadet George Jones; Second Lieutenant: Cadet James Goode; First Sergeant: Cadet Robert Taylor.

TEXAS TECH COMPANY, Texas Technological College, Lubbock, Texas—Captain: Cadet Norman Ben Bookout; First Lieutenant: Cadet Robert St. Clair; First Sergeant: Cadet Chester T. Oliver.

TULANE ROTC COMPANY, Tulane University, New Orleans 18, Louisiana—Captain: Cadet Owen J. Fells; First Lieutenant: Cadet Richard D. Lumsden; Second Lieutenant: Cadet Brian A. Lay; First Sergeant: Cadet Michael P. Porter.

UNIVERSITY OF IDAHO COMPANY, University of Idaho, Moscow, Idaho—Captain: Cadet William H. Mills; First Lieutenant: Cadet Don L. Evans; Second Lieutenant: Cadet Tony R. Bellamy; First Sergeant: Cadet Robert W. Meyers.

UNIVERSITY OF PENNSYLVANIA COMPANY, University of Pennsylvania, Philadelphia 4, Pennsylvania—Captain: Cadet Robert J. Hefter; First Lieutenant: Cadet Eugene Smith; Second Lieutenant: Cadet Charles E. Neu; First Sergeant: Cadet Paul H. Feinberg.

UNIVERSITY OF TEXAS COMPANY, University of Texas, Austin 12, Texas—Captain: Cadet Lewis Donaghey; First Lieutenant: Cadet James Kazen; Second Lieutenant: Cadet Joe Stoeltje; First Sergeant: Cadet George Batchelor.

UNIVERSITY OF WASHINGTON ROTC COMPANY, University of Washington, Seattle 5, Washington—Captain: Cadet John D. Livingston; First Lieutenant: Cadet Richard J. Poelker; Second Lieutenant: Cadet Frederic N. Thorpe; First Sergeant: Cadet Ronald M. Guiberson.

V. RAYMOND EDMAN COMPANY, Wheaton College, Wheaton, Illinois—Captain: Cadet Richard L. Benware; First Lieutenant: Cadet Robert F. Danner; Second Lieutenant: Cadet Raymond C. Carlson; First Sergeant: Cadet Gerald H. Wit.

VALLEY FORGE COMPANY, Valley Forge Military Academy, Wayne, Pennsylvania—Captain: Cadet John Bowers; First Lieutenant: Cadet Robert Jeffords; Second Lieutenant: Cadet Frank DeVilling; First Sergeant: Cadet William Clark.

VIRGINIA POLYTECHNIC INSTITUTE COMPANY, Virginia Polytechnic Institute, Blacksburg, Virginia—Captain: Cadet Ronald D. Oslin; First Lieutenant: Cadet Graham C. Lilly; Second Lieutenant: Cadet Donald W. Graham; First Sergeant: Cadet John G. Burgess.

WASHINGTON AND JEFFERSON ROTC COMPANY, Washington and Jefferson College, Washington, Pennsylvania—Captain: Cadet Lawrence Smith; First Lieutenant: Cadet George Downer; Second Lieutenant: Cadet Donald A. Anchors; First Sergeant: Cadet Steve A. Zuro, Jr.

WEST TEXAS STATE COMPANY, West Texas State College, Canyon, Tex.—Captain: Cadet Joe Giddens; First Lieutenant: Cadet Elvin J. Schofield; Second Lieutenant: Cadet Dan Broome; First Sergeant: Cadet Fontis B. Sexton.

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